

Aspire E1-431/E1-431G & E1-471/E1-471G

SERVICEGUIDE

acer

Revision History

Refer to the table below for the updates made to this service guide.

Date	Chapter	Updates

Service guide files and updates are available on the ACER/CSD Website. For more information, go to <http://csd.acer.com.tw>. The information in this guide is subject to change without notice.

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Conventions

The following conventions are used in this manual:

⚠ WARNING:

Indicates a potential for personal injury.

⚠ CAUTION:

Indicates a potential loss of data or damage to equipment.

+ IMPORTANT:

Indicates information that is important to know for the proper completion of a procedure, choice of an option, or completing a task.

The following typographical conventions are used in this document:

- Book titles, directory names, file names, path names, and program/process names are shown in *italics*.

Example:

the *DRS5 User's Guide*
/usr/local/bin/fd
the */TPH15spool_M* program

- Computer output (text that represents information displayed on a computer screen, such as menus, prompts, responses to input, and error messages) are shown in constant width.

Example:

[01] The server has been stopped

- User input (text that represents information entered by a computer user, such as command names, option letters, and words) are shown in constant width **bold**.

Variables contained within user input are shown in angle brackets (< >).

Example:

At the prompt, type run <file name> -m

- Keyboard keys are shown in ***bold italics***.

Example:

After entering data, press ***Enter***.

General Information

This service guide provides all technical information relating to the basic configuration for Acer's global product offering. To better fit local market requirements and enhance product competitiveness, the regional office may have decided to extend the functionality of a machine (such as add-on cards, modems, or extra memory capabilities). These localized features are not covered in this generic service guide. In such cases, contact the regional offices or the responsible personnel/channel to provide further technical details.

When ordering FRU parts: Check the most up-to-date information available on the Website. If, for whatever reason, a part number change is made, it may not be noted in this printed service guide.

Acer-authorized Service Providers: The Acer office may have a different part number code than those given in the FRU list in this service guide. A list must be provided by the regional Acer office to order FRU parts for repair and service of customer machines.

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Hardware Specifications and Configurations

Features

Below is a summary of the computer's features:

Operating System

- Genuine Windows® 7 Home Premium 64-bit² Service Pack 1
- Genuine Windows® 7 Home Basic 64-bit² Service Pack 1

CPU

Acer E1-431

- Intel® Pentium® processor **B960/B970** (2 MB L3 cache, 2.20/2.30 GHz, DDR3 1333 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Celeron® processor **B815** (2 MB L3 cache, 1.60 GHz, DDR3 1333 MHz, 35W), supporting Intel® 64 architecture, Intel® Smart Cache, Intel® Smart Cache

Acer E1-431G

- Intel® Pentium® processor **B960/B970** (2 MB L3 cache, 2.20/2.30 GHz, DDR3 1333 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache

Acer E1-471 & E1-471G

- Intel® Core™ i3-3110M processor (3 MB L3 cache, 2.30 GHz, DDR3 1600 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache
- Intel® Core™ i3-2350M/i3-2370M processor (3 MB L3 cache, 2.30/2.40 GHz, DDR3 1333 MHz, 35 W), supporting Intel® 64 architecture, Intel® Smart Cache

Chipset

Acer E1-431/E1-431G & Acer E1-471/E1-471G

- Mobile Intel® HM77 Express Chipset

System Memory

Dual-channel DDR3 SDRAM support:

- Up to 4 GB of DDR3 system memory, upgradable to 8 GB using two soDIMM modules

Display

- 14" HD 1366 x 768 pixel (WXGA) resolution, high-brightness (200-nit) Acer CineCrystal™ LED-backlit TFT LCD
- Mercury-free, environment-friendly
- 16:9 aspect ratio

Audio

- High-definition audio support
- Two built-in stereo speakers
- MS-Sound compatible
- Built-in microphone

Graphics

Acer E1-431

- Intel® HD Graphics with 128 MB of dedicated system memory, supporting Microsoft® DirectX® 10.1
- Dual independent display support
- 16.7 million colors
- External resolution / refresh rates:
 - VGA port up to 2048 x 1536: 75 Hz
 - HDMI® port up to 1920 x 1080: 60 Hz
- MPEG-2/DVD decoding
- WMV10 (VC-1) and H.264 (AVC) decoding
- HDMI® (High-Definition Multimedia Interface) with HDCP (High-bandwidth Digital Content Protection) support

Acer E1-471

- Intel® HD Graphics 3000 with 128 MB of dedicated system memory, supporting Microsoft® DirectX® 10.1
- Intel® HD Graphics 4000 with 128 MB of dedicated system memory, supporting Microsoft® DirectX® 11, OpenGL® 3.1, and OpenCL™ 1.1
- Dual independent display support
- 16.7 million colors
- External resolution / refresh rates:
 - VGA port up to 2048 x 1536: 75 Hz
 - HDMI® port up to 1920 x 1080: 60 Hz
- MPEG-2/DVD decoding
- WMV10 (VC-1) and H.264 (AVC) decoding
- HDMI® (High-Definition Multimedia Interface) with HDCP (High-bandwidth Digital Content Protection) support

Acer E1-431G & E1-471G

- NVIDIA® GeForce® GT 620M with 1 GB of dedicated DDR3 VRAM, supporting NVIDIA® CUDA™, PhysXTM, PureVideo® HD technology, OpenEXR High Dynamic-Range (HDR) technology, Shader Model 5.0, Microsoft® DirectX® 11, OpenGL® 4.1, and OpenCL™ 1.1
- Dual independent display support
- 16.7 million colors
- External resolution / refresh rates:
 - VGA port up to 2048 x 1536: 75 Hz
 - HDMI® port up to 1920 x 1080: 60 Hz
- MPEG-2/DVD decoding
- WMV10 (VC-1) and H.264 (AVC) decoding
- HDMI® (High-Definition Multimedia Interface) with HDCP (High-bandwidth Digital Content Protection) support

Storage

Hard disk drive:

- 320/500/750 GB or larger

Multi-in-1 card reader, supporting:

- Secure Digital™ (SD) Card, MultiMediaCard™ (MMC), Memory Stick™ (MS), Memory Stick PRO™ (MS PRO), and xD-Picture Card™ (xD)

Optical Media Drive

8X DVD-Super Multi double-layer drive:

- Read: 24X CD-ROM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 8X DVD-R, 8X DVD+R, 6X DVD-ROM DL, 4X DVD-R DL, 4X DVD+R DL, 6X DVD-RW, 6X DVD+RW, 5X DVD-RAM
- Write: 24X CD-R, 16X CD-RW, 8X DVD-R, 8X DVD+R, 4X DVD-R DL, 4X DVD+R DL, 6X DVD-RW, 8X DVD+RW, 5X DVD-RAM

Webcam

Acer Video Conference, featuring:

- Acer Crystal Eye webcam with
 - 1280 x 1024 resolution
 - 720p HD audio/video recording

Wireless and Networking

WLAN:

- Acer InviLink™ Nplify™ 802.11b/g/n Wi-Fi CERTIFIED™
- Supporting Acer SignalUp™ wireless technology

LAN:

- Gigabit Ethernet, Wake-on-LAN support
- PCI Express 1.1 support

Privacy Control

- BIOS user, supervisor, HDD passwords
- Kensington lock slot

Dimension and Weight

Dimensions:

- 342 (W) x 245 (D) x 27.2/33.4 (H) mm (13.5 x 9.6 x 1.07/1.31 inches)

Weight:

- 2.4 kg (5.29 lbs.) with 6-cell battery pack

Power Adapter and Battery

ACPI 3.0 CPU power management standard: supports Standby and Hibernation power-saving modes

Power adapter

- 3-pin 65W AC adapter:
 - 133 (W) x 59 (D) x 31 (H) mm (5.32 x 2.32 x 1.22 inches)
 - 390 g (0.86 lbs.) with 180 cm DC cable

Battery

- 48 Wh 4400 mAh 6-cell Li-ion standard battery pack
- Battery life:
 - E1-431: 4.0 hours
 - E1-431G: 4.5 hours
 - E1-471: 4.5 hours
 - E1-471G: 4.5 hours
- ENERGY STAR®

Input and Control

Keyboard

- 86-/87-/91-key Acer FineTip keyboard with International Language support
- Support Application keys for Windows Vista/Windows 7

Touchpad

- Multi-gesture touchpad, supporting two-finger scroll, pinch, rotate, flip

Media Keys

- Media control keys (printed on keyboard): play/pause, stop, previous, next, volume up, volume down

Input and Output (I/O) Ports

- Multi-in-1 card reader (SD™, MMC, MS, MS PRO, xD)
- Three USB 2.0 ports
- HDMI® port with HDCP support
- External display (VGA) port
- Headphone/speaker jack, supporting 3.5 mm headset with built-in microphone for Acer Smart handhelds
- Microphone-in jack
- Ethernet (RJ-45) port
- DC-in jack for AC adapter

Software

Productivity

- Acer Backup Manager
- Acer ePower Management
- Acer eRecovery Management
- Adobe® Flash® Player 10.x/11.x
- Adobe® Reader® 10.x
- AUPEO! (US only)
- Bing™ Bar
- Evernote (WW without Japan)
- Internet Explorer® 9
- Kobo™ (Australia, Canada, New Zealand, UK only)
- Microsoft® Office Starter 2010: Includes limited-functionality Microsoft® Word and Excel with advertising; no PowerPoint or Outlook. Buy Office 2010 to use the full-featured software (except Japan)
- Microsoft® Office Personal 2010 (Japan only, subject to customer request)
- NewsXpresso™

- NOOK for PC (US only)
- Norton™ Online Backup

Security

- McAfee® Internet Security Suite Trial
- MyWinLocker® (except China, Hong Kong)

Multimedia

- Acer clear.fi
- Cyberlink® MediaEspresso
- NTI Media Maker™

Gaming

- Acer Games powered by WildTangent® (except China, Hong Kong, Japan, Korea)
- Fooz Kids (WW without Japan)

Communication and ISP

- Windows Live™ Essentials 2011
- Skype™

Web links and utilities

- Acer Accessory Store (France, Spain, Germany, UK, Italy, Sweden, Netherlands, Belgium, Denmark, Portugal and Poland)
- Acer Identity Card
- Acer Registration
- Acer Updater
- eBay® shortcut (Australia, Austria, India, Ireland, Netherlands, Philippines, Poland, Russia, Singapore, Switzerland, US, CA, UK, FR, ES, IT, DE, MX only)
- Netflix shortcut (Canada, Latin America, US only)

Optional Items

- 2/4 GB DDR3 soDIMM module
- 6-cell Li-ion battery pack
- 3-pin 65 W AC adapter
- External USB 56K modem

Warranty

- One-year International Travelers Warranty (ITW)

Environment

- Temperature:
 - Operating: 5 °C to 35 °C
 - Non-operating: -20 °C to 65 °C
- Humidity (non-condensing):
 - Operating: 20% to 80%
 - Non-operating: 20% to 80%

Notebook Tour



Figure 1-1. Opened Front View

Table 1-1. Opened Front View

#	Icon	Item	Description
1		Microphone	Internal microphone for sound recording.
2		Display screen	Also called Liquid-Crystal Display (LCD), displays computer output (configuration may vary by model).
3		Power button	Turns the computer on and off.
4		Keyboard	For entering data into your computer
5		Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
6		Click button	The left and right buttons function like the left and right mouse buttons.
7		Integrated webcam	Web camera for video communication.



Figure 1-2. Closed Front View

Table 1-2. Closed Front View

#	Icon	Item	Description
1		Multi-in-1 Card Reader	Accepts various media card formats (MS, MS PRO, SD3.0, MMC, xD). Note: Push to remove/install the card. Only one card can operate at any given time.
2		Power indicator	Indicates the computer's power status.
		Battery indicator	Indicates the computer's battery status. 1. Charging: The light shows orange when the battery is charging. 2. Fully charged: The light shows blue when in AC mode.
		HDD/SSD/Card Reader activity indicator	Indicates the hard driver or card reader's activity of read/write operations
		Communication indicator	Indicates the computer's wireless (3G/Wi-Fi) connectivity device status.

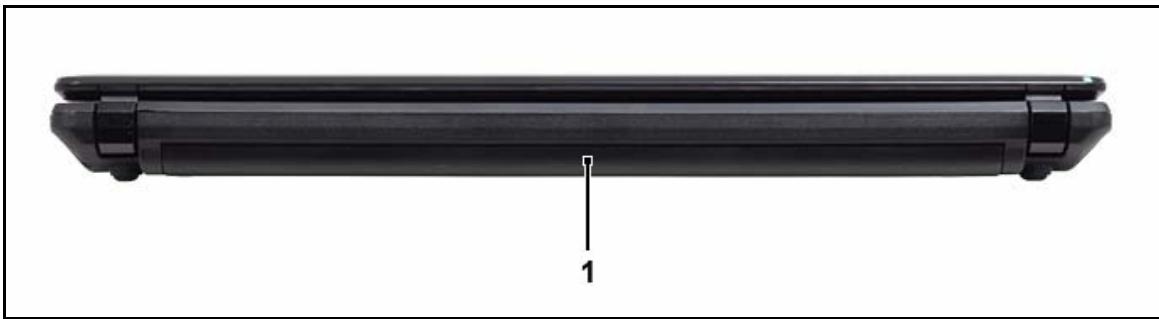


Figure 1-3. Rear View

Table 1-3. Rear View

#	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.

Note: Your computer may be equipped with a different battery than the one in the picture.

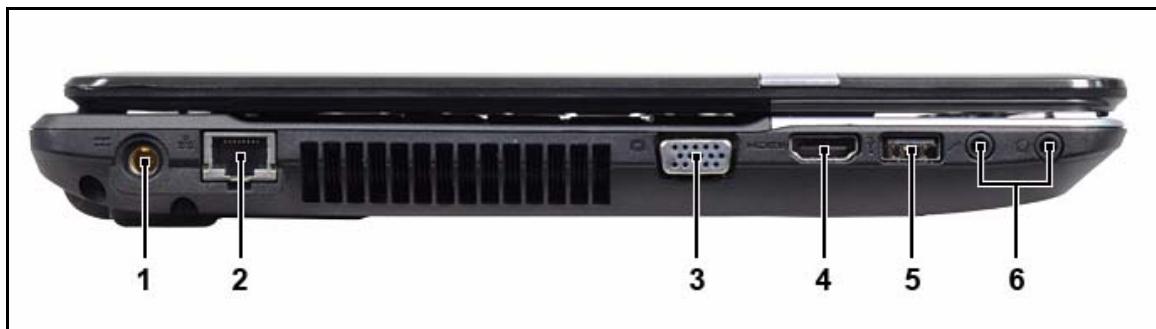


Figure 1-4. Left View

Table 1-4. Left View

#	Icon	Item	Description
1	⎓	DC-in jack	Connects to an AC adapter.
2	□□	Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000 based network.
3	□	External display (VGA) port	Connects to a display device (e.g., external monitor, LCD projector).
4	HDMI	HDMI port	Supports high-definition digital video connections.
5	USB	USB 2.0 port	Connects to USB 2.0 devices (e.g., USB mouse, USB camera), supporting Power-off Charging
6	Microphone	Microphone jack	Accepts inputs from external microphones.
	Headphone	Headphone/speaker jack	Connects to audio line-out devices (e.g., speakers, headphones).



Figure 1-5. Right View

Table 1-5. Right View

#	Icon	Item	Description
1		USB 2.0 ports	Connect to USB 2.0 devices (e.g., USB mouse, USB camera).
2		Optical drive	Internal optical drive; accepts CDs or DVDs.
3		Optical disk access indicator	Lights up when the optical drive is active.
4		Optical drive eject button	Ejects the optical disk from the drive.
5		Emergency eject hole	Ejects the optical drive tray when the computer is turned off. Note: Insert a paper clip to the emergency eject hole to eject the optical drive tray when the computer is off.
6		Kensington lock slot 	Connects to a Kensington-compatible computer security lock. Note: Wrap the computer security lock cable around an immovable object such as a table or handle of a locked drawer. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are also available.



Figure 1-6. Base View

Table 1-6. Base View

#	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.
2	🔒	Battery lock	Locks the battery in position.
3		Speakers	Emits audio from your computer.
3	Ổ đĩa	Hard disk bay	Houses the computer's hard disk (secured with screws).
	RAM	Memory compartment	Houses the computer's main memory
4		Speakers	Emits audio from your computer.
5		Ventilation slot and cooling fan	Enable the computer to stay cool, even after prolonged use. Note: Do not cover or obstruct the opening of the fan.

Touchpad Basics

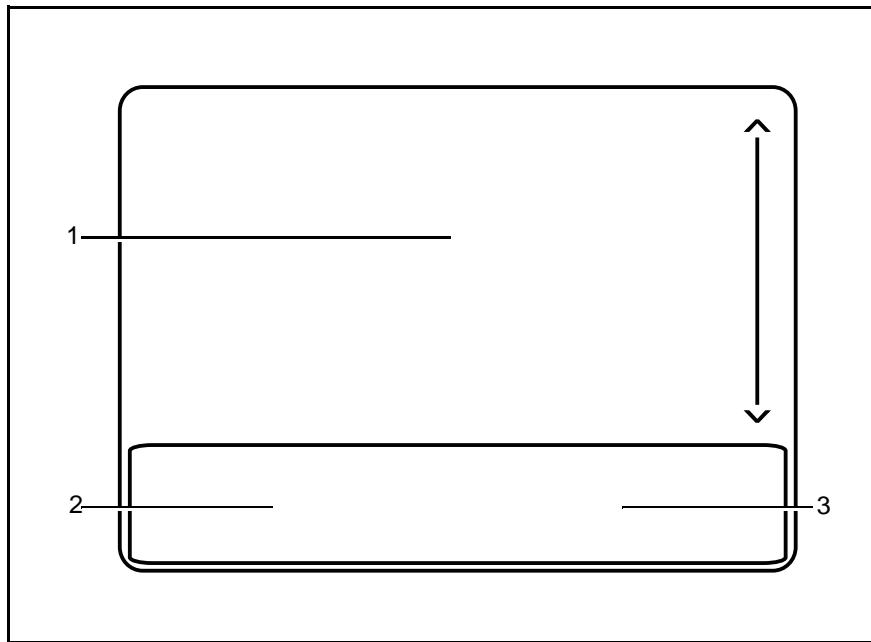


Figure 1-7. Touchpad

- Move your finger across the Touchpad (1) to move the cursor.
- Press the left (2) and right (3) buttons located beneath the Touchpad to perform selection and execution functions. These two buttons are the equivalent of the left and right buttons on a mouse. Tapping on the Touchpad is the same as clicking the left button.

Function	Main Touchpad (1)	Left Button (2)	Right Button (3)
Execute	Tap twice (at the same speed as double-clicking a mouse button).	Quickly click twice.	
Select	Tap once.	Click once.	
Drag	Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the Touchpad on the second tap and drag the cursor.	Click and hold, then use finger on the Touchpad to drag the cursor.	
Access context menu			Click once.

⇒ NOTE:
When using the Touchpad, keep it - and fingers - dry and clean. The Touchpad is sensitive to finger movement; hence, the lighter the touch, the better the response. Tapping too hard will not increase the Touchpad's responsiveness.

Using the Keyboard

The computer has a close-to-full-sized keyboard and an embedded numeric keypad, separate cursor, lock, function and special keys.



Figure 1-8. Keyboard Lock Keys

Lock Keys

The keyboard has three lock keys which can be toggled on and off.

Lock key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num Lock <Fn> + <F11>	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when doing a lot of numeric data entry. A better solution would be to connect an external keypad.
Scroll Lock <Fn> + <F12>	When Scroll Lock is on, the screen moves one line up or down when the up or down arrow keys are pressed respectively. Scroll Lock does not work with some applications.

Embedded Numeric Keypad

The embedded numeric keypad functions like a desktop numeric keypad. It is indicated by small characters located on the upper right corner of the key caps. To simplify the keyboard legend, cursor-control key symbols are not printed on the keys.

Table 1-7. Embedded Numeric Keypad

Desired access	Num Lock on	Num Lock off
Number keys on embedded keypad	Type numbers in a normal manner.	
Cursor-control keys on embedded keypad	Hold <Shift> while using cursor-control keys.	Hold <Fn> while using cursor-control keys.
Main keyboard keys	Hold <Fn> while typing letters on embedded keypad.	Type the letters in a normal manner.

Windows Keys

The keyboard has two keys that perform Windows-specific functions.

-  Windows Logo key
-  Application key

Key	Description
Windows Logo key	<p>Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions.</p> <p>Functions supported by Windows XP, Windows Vista, and Windows 7:</p> <ul style="list-style-type: none"><>: Open or close the Start menu<> + <R>: Open the Run dialog box<> + <M>: Minimizes all windows<SHIFT> + <> + M: Undo minimize all windows<> + <F1>: Show the help window<> + <E>: Open Windows Explorer<> + <F>: Search for a file or folder<> + <D>: Show the desktop<CTRL> + <> + <F>: Search for computers (if you are on a network)<> + <L>: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain)<CTRL> + <> + <TAB>: Moves focus from Start menu, to the Quick Launch toolbar, to the system tray (use RIGHT ARROW or LEFT ARROW to move focus to items on the Quick Launch toolbar and the system tray)<> + <TAB>: Cycle through programs on the taskbar<> + <BREAK>: Display the System Properties dialog box <p>Functions supported by Windows XP:</p> <ul style="list-style-type: none"><> + <BREAK>: Show the System Properties dialog box<> + <U>: Open Ease of Access Center
Application key	This key has the same effect as clicking the right mouse button; it opens the application's context menu.

Hotkeys

The computer employs hotkeys or key combinations to access most of the computer's controls like screen brightness and volume output.



Figure 1-9. Keyboard Hotkeys

To activate hotkeys, press and hold the **<Fn>** key before pressing the other key in the hotkey combination.

Hot key	Icon	Function	Description
<Fn> + <F3>		Communication	Enables/disables the computer's communication devices.
<Fn> + <F4>		Sleep	Puts the computer in Sleep mode.
<Fn> + <F5>		Display toggle	Switches display output between the display screen, external monitor (if connected) and both.
<Fn> + <F6>		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
<Fn> + <F7>		Touchpad toggle	Turns the internal touchpad on and off.
<Fn> + <F8>		Speaker toggle	Turns the speakers on and off.
<Fn> + <△>		Brightness up	Increases the screen brightness.
<Fn> + <▽>		Brightness down	Decreases the screen brightness.

Hot key	Icon	Function	Description
<Fn> + <△>		Volume up	Increases the sound volume.
<Fn> + <▽>		Volume down	Decreases the sound volume.
<Fn> + <Home>		Play/Pause	Plays or pauses a selected media file.
<Fn> + <Pg Up>		Stop	Stop playing the selected media file.
<Fn> + <Pg Dn>		Previous	Return to the previous media file.
<Fn> + <End>		Next	Jump to the next media file.

System Block Diagram

SYSTEM BLOCK DIAGRAM

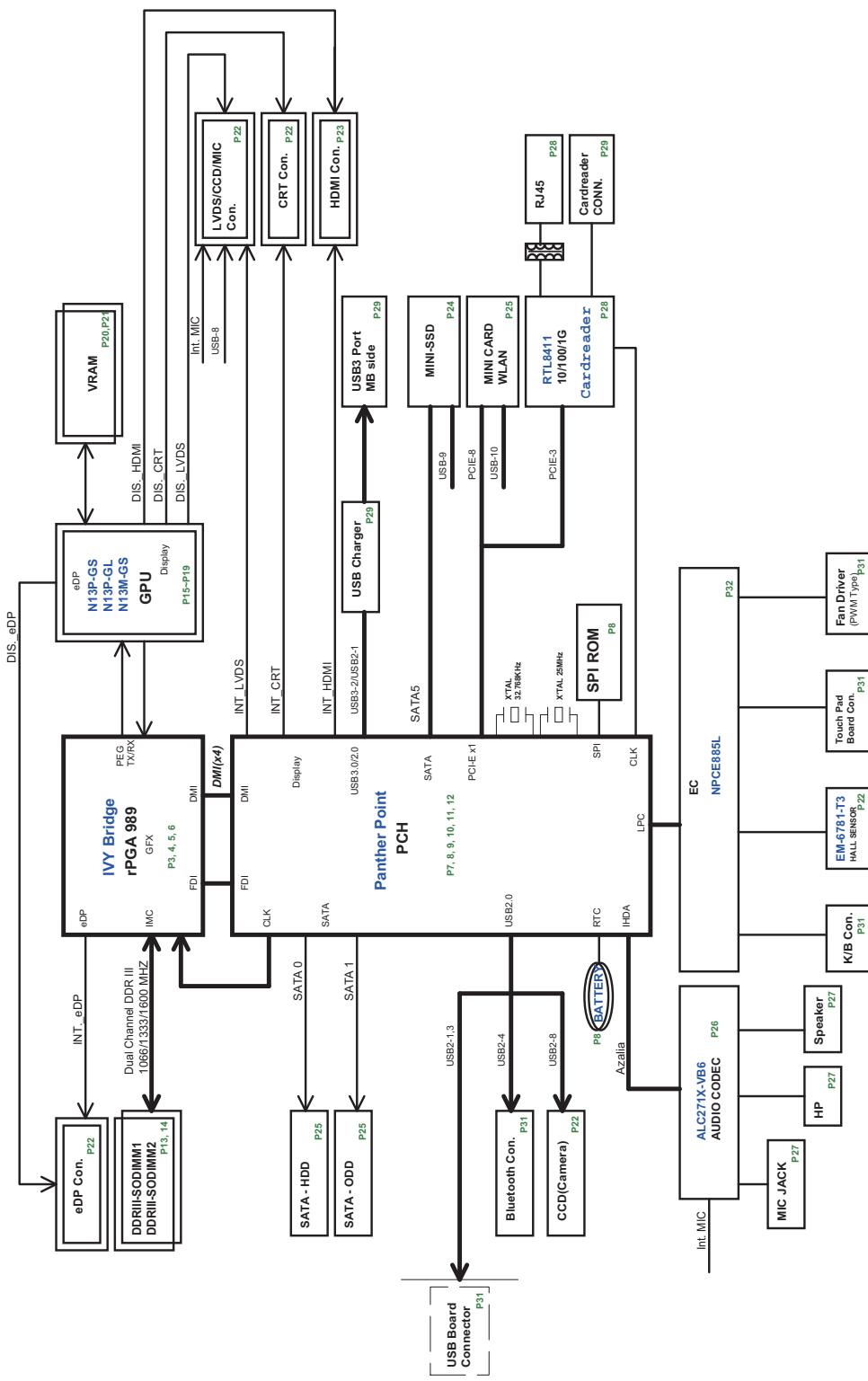


Figure 1-10. System Block Diagram

Specification Tables

Computer specifications

Item	Metric	Imperial
Dimensions		
Length	245 mm	9.6 in.
Width	342 mm	13.5 in.
Height (front to rear)	27.2/33.4 mm	1.07/1.31 in.
Weight (equipped with optical drive, flash drive, and battery)	2.4 kg with battery	5.29 lbs with battery
Input power		
Operating voltage	19V	
Operating current	3.42A	
Temperature		
Operating (not writing to optical disc)	0°C to 35°C	32°F to 95°F
Operating (writing to optical disc)	0°C to 40°C	32°F to 104°F
Nonoperating	-20°C to 65°C	-4°F to 149°F
Relative humidity		
Operating	20% to 80%	
Nonoperating	20% to 80%	
Maximum altitude (unpressurized)		
Operating	-15 to 3,048m	-50 to 10,000ft
Nonoperating	-15 to 12,192m	-50 to 40,000ft
Shock		
Operating	105G, 2 ms, half-sine	
Nonoperating	220 G, 2 ms, half-sine	
Random vibration		
Operating	0.6G/5~500HZ/30min per axis	
Nonoperating	1.5G/5~500HZ/30 min per axis	

⇒ NOTE:

Applicable product safety standards specify thermal limits for plastic surfaces. The computer operates well within this range of temperatures.

System Board Major Chips

Item	Specification
Core logic	Intel HM77 (Panther Point)
VGA	Integrated Graphics Controller for E1-431 & E1-471; NVIDIA GeForce for V1-431G & V1-471G
LAN	Realtek RTL8411-CG
USB 2.0	Embedded in PCH
Super I/O controller	Intel Chief River
Bluetooth	N/A
Wireless	Intel PCIE half mini card 802.11b/g/n
PCMCIA	N/A
Audio codec	Realtek HD codec
Card reader	Realtek RTL8411-CG
eSata	N/A

Processor

Item	Specification
CPU type	Intel Ivy bridge & Sandy bridge series
CPU package	989-pin rPGA
Core Logic	<p>Two execution cores</p> <ul style="list-style-type: none"> • A 64-KB (32-KB instruction and 32-KB data) first-level cache (L1) for each core • A 256-KB shared instruction/data second-level cache (L2) for each core • Up to 4-MB shared instruction/data third-level cache (L3), shared among all cores
Chipset	Intel HM77

Processor Specifications

Item	CPU Speed (GHz)	Cores/Threads	Bus Speed (FSB/DMI/QPI)	Mfg Tech (nm)	Cache Size	Package	Voltage
Core i3-2350M	2.3	2 / 4	5 GT/s	32	3MB L3	rPGA	0.8V ~ 1.35V
Core i3-2370M	2.4	2 / 4	5 GT/s	32	3MB L3	rPGA	0.75 ~ 1.30V
Core i3-3110M	2.3	2 / 4	5 GT/s	32	3MB L3	rPGA	-
Pentium Dual-Core B960	2.2	2 / 2	5 GT/s	32	2MB L3	rPGA	0.8V ~ 1.35V
Pentium Dual-Core B970	2.3	2 / 2	5 GT/s	32	2MB L3	rPGA	0.8V ~ 1.35V
Celeron Dual-Core B815	1.6	2 / 2	5 GT/s	32	2MB L3	rPGA	0.8V ~ 1.35V

CPU Fan True Value Table

Temperature (°C)	Fan Speed (RPM)	SPL Spec (dBA)
Fan on = 40°C; Fan Off = 35°C	2400	28
Fan on = 50°C; Fan Off = 45°C	2600	31
Fan on = 62°C; Fan Off = 55°C	3000	34
Fan on = 72°C; Fan Off = 67°C	3300	37
Fan on = 86°C; Fan Off = 80°C	3600	40
Fan on = 94°C; Fan Off = 90°C	5V	N/A

- Throttling 50%: On = 96°C; Off = 93°C
- OS Shut down: 99°C
- H/W Shut down: 100°C

System Memory

Item	Specification
Memory controller	Built in at CPU
Memory size	DDR3 1333/1600 2 GB (256 Meg x 64), 4 GB (512 Meg x 64)
DIMM socket number	2 sockets
Supports memory size per socket	4 GB
Supports maximum memory size	8 GB
Supports DIMM type	<ul style="list-style-type: none"> SDRAM memory interface design <p>Note: Processor supports up to 1600 Mhz only</p>
Supports DIMM Speed	1333/1600 SODIMM
Support DIMM voltage	1.5V±0.075V
Supports DIMM package	Standard JEDEC 204-pin

Memory Combinations

Slot 1 (MB)	Slot 2 (MB)	Total Memory (MB)
0	2048	2048
2048	0	2048
2048	2048	4096
4096	0	4096
0	4096	4096
4096	4096	8192

Video Interface

Item	Specification
Chipset	Built-in Intel Ivy Bridge CPU
Package	rPGA 989
Interface	LVDS / CRT
Compatibility	1366x768/60Hz (16:9) / 1280x1024/60Hz (4:3) / 1920x1080/60Hz (16:9) / 2048x1536/75Hz (4:3)
Sampling rate	60Hz

BIOS

Item	Specification
BIOS vendor	Insyde
BIOS Version	1.08
BIOS ROM type	W25Q16BVSSIG (16M-bit), W25Q32BVSSIG (32M-bit)
BIOS ROM size	4MB Serial Flash Memory
Features	<ul style="list-style-type: none">• Insyde code base• boot block• non-shadow RAM support• uEFI

Keyboard

Item	Specification
Type	Acer TM4T_A11B keyboard
Total number of keypads	86-US/87-UK/91-JP key
Windows logo key	Yes
Internal & external keyboard work simultaneously	Plug USB keyboard to the USB port directly: Yes
Features	<ul style="list-style-type: none">• Phantom key auto detect• Overlay numeric keypad• Support independent pgdn/pgup/home/end keys• Support reverse T cursor keys• Factory configurable different languages by OEM customer

Hard Disk Drive (AVL components)

Item	Specification	
Vendor & Model Name	Hitachi HTS543232A7A384 Seagate ST320LT020 WD WD3200BPVT TOSHIBA MK3259GSXP	Hitachi HTS545050A7E380 Seagate ST9500325AS WD WD5000BPVT TOSHIBA MK5059GSXP
Capacity (GB)	320	500
Bytes per sector	512	
Data heads	2	2, 2, 4, 4
Drive Format		
Disks	1	1, 2, 2, 2
Spindle speed (RPM)	5400	
Performance Specifications		
Buffer size	8MB	
Interface	SATA	
Fast data transfer rate (Gbits / sec, max)	3.0	3.0
Media data transfer rate (Mbytes/sec max)	994, 1044, 116, 584.3~1195.5	1004, 1175, 151, 584.3~1195.5
DC Power Requirements		
Voltage tolerance	5V ±5%	

Hard Disk Drive (AVL components) (Continued)

Item	Specification	
Vendor & Model Name	WD WD6400BPVT TOSHIBA MK6459GSXP	Hitachi HTS547575A9E384 Seagate ST9750423AS WD WD7500BPVT TOSHIBA MK7559GSXP
Capacity (GB)	640	750
Bytes per sector	512	
Data heads	4	4
Drive Format		
Disks	2	2
Spindle speed (RPM)	5400	
Performance Specifications		
Buffer size	8MB	
Interface	SATA	
Fast data transfer rate (Gbits / sec, max)	3.0	3.0
Media data transfer rate (Mbytes/sec max)	151, 584.5~1195.5	996, 1130, 151, 584.3~1195.5
DC Power Requirements		
Voltage tolerance	5V ±5%	

DVD Super-Multi Drive

Item	Specification			
Vendor & Model name	HLDs GT51NLF		Panasonic UJ8B0	
Performance Specification	With CD Diskette	With DVD Diskette	With CD Diskette	With DVD Diskette
Transfer rate (Mbytes/sec)	Sustained: Max 3.5 (24x)	Sustained: Max 11.08 (8x)	Sustained: Max 3.5 (24x)	Sustained: Max 10.54 (8x)
Buffer Memory	1 MB			
Interface	SATA			
Applicable disc format	DVD: •DVD-ROM: 4.7GB (Single Layer) 8.5GB (Dual Layer) •DVD-R: 3.95GB (Ver. 1.0: read only) 4.7GB (Ver. 2.0 for Authoring: read only) 4.7GB (Ver. 2.1 for General: read & write) •DVD-R DL: 8.5GB (Ver. 3.0) •DVD-RW: 4.7GB (Ver. 1.2/ Rev 1.0, 2.0, 3.0) •DVD-RAM: 4.7GB/side (Ver. 2.2) •DVD+R: 4.7GB (Ver. 1.3) •DVD+R DL: 8.5GB (Ver. 1.1) •DVD+RW: 4.7GB (Vol.1, Ver.1.3) CD: •CD-ROM Mode-1 data disc •CD-ROM Mode-2 data disc •CD-ROM XA, CD-I, Photo-CD Multi- Session, Video CD, CD-Audio Disc •Mixed mode, CD-ROM disc (data and audio) •CD-Extra •CD-Text •CD-R •CD-RW		DVD: •DVD-VIDEO, DVD-ROM, DVD-R (4.7GB), DVD-R DL, DVD-RW (Ver.1.1/1.2), DVD+R, DVD+R DL, DVD+RW, DVD-R DL (Format 1/4) CD: •CD-DA, CD-ROM, CD-ROM XA, PhotoCD (MultiSession), Video CD, CD-Extra (CD+), CD-text	
Loading mechanism	Drawer type manual load / Electrical release		Tray-type loading	
Power Requirements				
Input Voltage	5 V +/- 5% (Operating)		DC 5V +/- 0.25V (Operating)	

DVD Super-Multi Drive (Continued)

Item	Specification			
Vendor & Model name	Pioneer DVR-TD11RS		PLDS DS-8A8SH	
Performance Specification	With CD Diskette	With DVD Diskette	With CD Diskette	With DVD Diskette
Transfer rate (Mbytes/sec)	Sustained: Max 3.5 (24x)	Sustained: Max 10.54 (8x)	Sustained: - CD-ROM inside 1.41 - CD-ROM outside 3.41	Sustained: - DVD-ROM inside 3.61 - DVD-ROM outside 9.76
Buffer Memory	1 MB			
Interface	SATA			
Applicable disc format	DVD: •DVD-ROM •DVD-R Ver.2.0 & 2.1 for General (Read/Write) •DVD-R DL Ver.3.0 (Read/Write) •DVD-RW Ver.1.0&1.1&1.2(Read/Write) •DVD+R Ver.1.3 (Read/Write) •DVD+R DL Ver1.0&1.1(Read/Write) •DVD+RW Ver.1.3 (Read/Write) •DVD+RW high speed Ver.1.0 (Read/Write) •DVD-RAM Ver.2.0&2.1&2.2(*1) CD: •KODAK PhotoCD Single and Multi-session •CD Extra(CDPLUS) •Video CD •CD text data(Read/Write) •CD-R discs(Read/Write) •CD-RW discs(Read/Write)		DVD: •DVD-ROM •DVD-Video, DVD-Audio •DVD-RW •DVD+RW •DVD-R single/multi border(s) •DVD+R single/multi session(s) •DVD-R9 single/multi border(s) •DVD+R9 single/multi session(s) •DVD-RA CD: •CD-DA, CD-TEXT, CD ROM Mode-1, •CD-ROM/XA Mode-2 Form-1 and Form-2, •CD-I Ready, Video-CD (MPEG-1), •Photo-CD, Enhance CD, •CD extra, UDF (fixed/variable Packet mode)	
Loading mechanism	Tray-type loading		Manual load Plunger system	
Power Requirements				
Input Voltage	5V +/- 5% (Operating)		5V +/- 5%	

LCD 14.0"

Item	Specification	
Vendor & Model name	AUO B140XW01	AUO B140XTN01
Screen Diagonal (mm)	354.95	
Active Area (mm)	309.40 x 173.95	
Display resolution (pixels)	1366x3 (RGB) x 768	
Pixel Pitch (mm)	0.2265 x 0.2265	
Typical White Luminance (cd/m ²) also called Brightness	200 typ. (5 points average) 170 min. (5 points average)	
Contrast Ratio	500 typ.	
Response Time (Optical Rise Time/Fall Time) msec	8 typ. / 16 max.	
Typical Power Consumption (watt)	3.8 max. (Include Logic and B/L power)	4.3 max. (Include Logic and B/L power)
Weight (without inverter)	350 max.	
Physical Size (mm)	324 (H) x 192.5 (V) x 5.2 (D)	
Electrical Interface	1 channel LVDS	
Viewing Angle (degree) Horizontal (Right) CR = 10 (Left) Vertical (Upper) CR = 10 (Lower)	40 min. / 45 typ. 40 min. / 45 typ. 10 min. / 15 typ. 30 min. / 35 typ.	

LCD 14.0" (Continued)

Item	Specification	
Vendor & Model name	LG LP140WH4	Chimei BT140GW01
Screen Diagonal (mm)	354.95	
Active Area (mm)	309.40 x 173.95	
Display resolution (pixels)	1366 horiz. x 768 vert.	
Pixel Pitch (mm)	0.2265 x 0.2265	
Typical White Luminance (cd/m ²) also called Brightness	220 typ. (5 points average) 185 min. (5 points average)	220 typ. (5 points average) 190 min. (5 points average)
Contrast Ratio	400 min.	500 min. / 600 typ.
Response Time (Optical Rise Time/Fall Time) msec	16 typ.	8 typ. / 15 max.
Typical Power Consumption (watt)	Total: 4.4 W max. Logic: 1.0W B/L: 3.4W	Total: 4 W max. Logic: 0.9W B/L: 3.1W
Weight (without inverter)	350 max.	
Physical Size (mm)	323.5 (H) x 192.0 (V) x 5.2 (D)	324 (H) x 192.5 (V) x 5.2 (D)
Electrical Interface	1 channel LVDS	
Viewing Angle (degree) Horizontal (Right) CR = 10 (Left)	40 min. 40 min.	40 min. 40 min.
Vertical (Upper) CR = 10 (Lower)	10 min. 30 min.	15 min. 30 min.

LCD Inverter (not available with this model)

Item	Specification
Vendor & Model name	
Brightness conditions	
Input voltage (v)	
Input current (mA)	
Output voltage (V, RMS)	
Output current (mA, RMS)	
Output voltage frequency (KHz)	

Display Supported Resolution (LCD Supported Resolution)

Resolution	16 bits	32 bits	Intel
1280X720 / 60Hz	Yes	Yes	Yes
1366X768 / 60Hz	Yes	Yes	Yes

Graphics Controller

Item	Specification
VGA Chip	Intel® HD Graphics 3000/4000
Package	Built-in to the CPU
Feature	<ul style="list-style-type: none"> • Intel Smart 2D Display Technology • 3D visual experience support • Intel Dual-Frequency Graphics Technology support • Analog CRT DAC Interface support • Analog TV-OUT Interface support (support EZ4 Dock only) • Serial Digital Video Out Port (SDVO) Interface support (support EZ4 Dock only) • Digital LVDS Interface support • Accelerated graphics processing the shared last-level cache between the processor and graphics • Intel® 32 nm process technology for HD Graphics 3000, 22 nm process technology for HD Graphics 4000 • Faster 3D rendering and and more complex shading create more responsive and realistic 3D gaming • HD Graphics 3000 supports DirectX® 10.1, OpenGL® 3.0, OpenCL™ 1.0 and Shader Model 4.1 • HD Graphic 4000 supports DirectX® 11, OpenGL® 3.1, OpenCL™ 1.1, and Shader Model 5.0
VGA Chip	NVIDIA® GeForce GT 620M
Package	On-board GPU
Feature	<ul style="list-style-type: none"> • NVIDIA® Optimus™ technology • NVIDIA® PureVideo™ HD technology • NVIDIA® PowerMizer™ SX technology • OpenEXR High Dynamic_Range (HDR) technology • Supports NVDIA® CUDA™ and NVDIA® PhysX™ • Blu-ray movies, including “picture-in-picture”, interactive games and menus support • Ultra-smooth playback of H.264, WMV/VC-1 and MPEG-4 HD and SD videos with minimal CPU usage • Supports DirectX® 11, OpenGL® 3.2, OpenCL™ 1.1 and Shader Model 5.0

Display Supported Resolution (GPU Supported Resolution)

Resolution	16 bits	32 bits	Intel
800X600 / 60Hz	Yes	Yes	Yes
1024X768 / 60Hz	Yes	Yes	Yes
1280X600 / 60Hz	Yes	Yes	Yes
1280X720 / 60Hz	Yes	Yes	Yes
1280x768 / 60Hz	Yes	Yes	Yes
1360x768 / 60Hz	Yes	Yes	Yes
1366x768 / 60Hz	Yes	Yes	Yes

LAN Interface

Item	Specification
LAN chipset	Realtek RTL8411-CG
Package	64-pin QFN package (Green package)
LAN connector type	RJ45
LAN connector location	RJ45 port at the left side
Features	<ul style="list-style-type: none"> PCI Express 10/100/1000 Mbps Ethernet Controller with integrated 1-LUN Card Reader Controller ACPI, PCI-MSI and MSI-X supported Auto-Negotiation with Next Page capability Supports pair swap/polarity/skew correction Wake-on-LAN support Fully complies with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab Embedded OTP memory can replace the external EEPROM Supports power down/link down power saving/PHY disable mode/LAN disable mode

Bluetooth Interface (not available in this model)

Item	Specifications
Chipset	
Data throughput	
Protocol	
Interface	
Connector type	
Supported protocol	

Bluetooth Module (not available in this model)

Item	Specifications
Controller	
Feature	

Wireless Module 802.11b/g/n

Item	Specification	
Chipset	BCM 4313	Atheros HB125
Data throughput	11-54 Mbps, up to 72.2 Mbps for Draft-N	11-54 Mbps, up to 150 Mbps
Protocol	b, g, n	b, g, n
Interface	PCI-E half mini card	

Mini Card Wireless Networking Card

Item	Specification
Vendor	Atheros HB125/Broadcom 4313
Number supported	1
Features	1 mini PCIE card slot (for WLAN or WWAN/WiMax)

3G Card (not available in this model)

Item	Specification
Features	

Audio Codec and Amplifier

Item	Specification
Audio Controller	Realtek ALC271X-VB6
Features	<p>Hardware:</p> <ul style="list-style-type: none"> • Meets WLP (Windows Logo Program) requirements for Windows XP, Vista and Windows 7 • 4-channel DAC supports 16/20/24-bit PCM format for independent two stereo channel or 2.1 audio playback • 4-channel ADC supports 16/20/24-bit PCM format for independent two stereo channel audio inputs • All DACs supports 44.1k/48k/96k/192kHz sample rate • All ADCs support 44.1k/48k/96k/192kHz sample rate • S/PDIF-OUT support 16/20/24-bit format and 44.1/48/88.2/96/192kHz rate • Supports MONO line level output, and Stereo digital microphone input • Supports external PCBEEP input and built-in digital BEEP generator • Built-in headphone amplifiers for port-C (LINE1) and port-I (HP OUT) • Programmable +12/+24/+36db boost gain and volume control for analog microphone input • Headphone amplifier for port-I does not require DC blocking capacitors • Two jack detection pins each designed to detect up to 4 jacks, and S/PDIF-OUT jack detection is supported • 2 GPIOs are supported for customized applications (pin shared with digital microphone interface) • EAPD (External Amplifier Power Down) is supported • Supports Anti-pop mode when analog power AVDD is on and digital power is off. • Support PC-Beep to internal speaker out (Port D) when no HDA control, while AVDD and PVDD is supplied. • Power support: 3.3V digital core power; 1.5V~3.3V digital IO power for HDA link; 3.0V~5.5V analog power; 4.5V~5.5V power stage voltage • Enhanced power management features for normal operation and standby mode • Stereo Bridge-Tied Load Class-D amplifier at port-D has 2Watt (rms)/4\ per channel output • Short circuit and thermal overload protection for Class-D amplifier • Class D amplifier has high pass filter with programmable Cut-Off frequency (10Hz~900Hz) to prevent low frequency signal damage speaker • Class D amplifier output with slew rate and spread spectrum control to improve EMI performance • Independent left and right channel of output power limiter (25%~100% power range) to protect speaker • Intel low power ECR compliant: supports power status control, jack detection, and wake-up event in D3 mode • Built in a 5V-to-4.5V linear regulator with 60dB PSRR to power analog circuitry • 48-pin QFN 'Green' package

Audio Codec and Amplifier (Continued)

Item	Specification
Features	<p>Software:</p> <ul style="list-style-type: none"> • Compatible with Windows Logo Program 3.10 and future requirements • WaveRT-based audio function driver for Windows Vista • EAX™ 1.0 & 2.0, Direct Sound 3D, and I3DL2 compatible • HRTF 3D Positional Audio (Windows XP only) • Emulation of 26 sound environments to enhance gaming experience • Multi-band software equalizer and tools • Voice Cancellation and Key Shifting in Karaoke mode • Dynamic range control (expander, compressor, and limiter) with adjustable parameters • Intuitive Configuration Panel (Realtek Audio Manager) to enhance user experience • Microphone Acoustic Echo Cancellation (AEC), Noise Suppression (NS), and Beam Forming (BF) technology for voice application • Smart multiple streaming operation • HDMI audio driver for AMD platform • Dolby ® PCEE program™ (optional software feature) • Fortimedia ® SAM™ technology for voice processing (Beam Forming and Acoustic Echo Cancellation) (optional software feature)
Amplifier	Stereo Class-D Speaker Amplifier with 2 watt per channel output power

Audio Interface

Item	Specification
Audio Controller	Realtek ALC271X-VB6
Audio onboard or optional	On board
Mono or Stereo	Mono output, Stereo input
Resolution	Support 16/20/24bit PCM
Compatibility	HD audio Interface
Sampling rate	Sample rate up to 192Khz resolution VSR (Variable Sampling Rate)
Internal microphone	Yes
Internal speaker/quantity	Yes/2 channel speakers with 2W per channel outputx1

1.3M HD Camera

Item	Specification		
Vendor & Model	Liteon 10P2SF205 10P2TF103A 11P2SF109 11P2SF168	Suyin HF1316_A821 HF1316_P80A HF2015_A821	Chicony CH_OV9726_AU (CNFB1E1)
Type	CMOS image sensor with SXGA (1280 x 1024) or WXGA (1280 x 800)	CMOS image sensor with SXGA for HF1316; OV2659 for HF2015 (1600 x 1200)	CMOS image sensor with SXGA (1280 x 720)
feature	Pixel Resolution: 1280 x 1024 (HD)		

0.3 M Camera

Item	Specification		
Vendor & Model	Liteon 10P2SF005	Suyin HF0319_M08C	Chicony CH_7675_AL (CNFA028)
Type	CMOS image sensor with OVT, OV7675, CSP	CMOS image sensor with OV7675	CMOS image sensor with SXGA
feature	Pixel Resolution: 640 x 480 (VGA)		

VRAM

Item	Specification
Vendor & Model name	Hynix H5TQ2G63BFR-11C LF H5TQ2G63DFR-11C LF+HF
Memory size	2GB
Interface	TBD

USB Port

Item	Specification
USB compliance level	Universal Serial Bus 2.0
EHCI	2
Number of USB port(s)	3
Location	1 left side, 2 right side
Output Current	1.05A

HDMI Port

Item	Specification
Compliance level	HDMI 1.3a
Data throughput	Up to 16.7 million colors
Number of HDMI port(s)	1
Location	1 left side

Battery

Item	Specification
Vendor & Model name	SANYO AS10D31 / SONY AS10D41 / Panasonic AS10D51 / Samsung AS10D61 / Simplio AS10D73, AS10D75 / LGC AS10D81
Battery Type	Lithium-Ion
Pack capacity	4400mAh
Number of battery cell	6
Package configuration	3S2P

AC Adapter

Item	Specification
Vendor	DELTA/Chicony Power (65W); Lite-on/Chicony Power (90W)
Input rating	100-240 Vac, 50-60 Hz, input current ~1.7 Amps
Maximum input AC current	264 Vrms
Inrush current	264 Vac (Cold/Hot start) No damage; meet fuse and bridge diode $\mathcal{P}t$ de-rating.
Efficiency	Meets EPA 2.0 level V requirement. The adapter efficiency shall be more than 87%, that is the average value of 25%, 50%, 75% and 100% load with both 115Vac/60Hz and 230Vac/50Hz input voltage condition.

System Power Management

Item	Specification
Mech. Off (G3)	All devices in the system are turned off completely.
Soft Off (G2/S5)	OS initiated shutdown. All devices in the system are turned off completely.
Working (G0/S0)	Individual devices such as the CPU and hard disc may be power managed in this state.
Suspend to RAM (S3)	<ul style="list-style-type: none"> • CPU set power down • VGA Suspend • PCMCIA Suspend • Audio Power Down • Hard Disk Power Down • CD-ROM Power Down • Super I/O Low Power mode
Save to Disk (S4)	Also called Hibernation Mode. System saves all system states and data onto the disc prior to power off the whole system.

Card Reader

Item	Specification
Chipset	Realtek RTL8411-CG
Package	64-pin QFN package (Green package)
Maximum supported size	32 GB
Features	<p>Multi-in-1 card reader controller, supporting:</p> <ul style="list-style-type: none"> • Secure Digital™ (SD) Card up to version 3.0, SDHC, SDXC, Mini-SD, Micro-SD (T-Flash) • MultiMediaCard™ (MMC) up to version 4.2, RS-MMC, Mobile-MMC, MMC-micro and MMC-plus • Memory Stick (MS, v1.43), Memory Stick PRO (MS-PRO v1.03), MS Duo, MS-PRO Duo, Micro-MS (M2), MS-PRO-HG Duo v1.01 8-bit mode, and MSXC • xD-Picture Card (xD) up to version 1.2, including Type M+, Type M, and Type H • On chip MOSFET with 800mA capability for direct power control of all types memory cards <p>Supports both Windows and Mac OS</p>

System LED Indicator

Item	Specification
Lock	<ul style="list-style-type: none"> • Caps Lock on = Blue • Caps Lock enabled in S0, S1 on = Blue
System state	<ul style="list-style-type: none"> • Blue color on: System on • Blue color and orange color off: System off • Breeze mode Orange: Stand-by • Orange color on: S3
HDD access state	HDD access active = Blue (Fast blinking means HDD is running or accessing to data)
ODD activity state	ODD active = Green or Orange (depends on module)
Communication state	Blue color: 3G on, both 3G and WiFi on Orange color: WiFi on
Power button backlight	<ul style="list-style-type: none"> • Blue color solid on: System on • Blue color off: System off
Battery state	<ul style="list-style-type: none"> • Full charging = Blue • Battery charging = Orange • Battery low = Breeze mode Orange (1 sec on, 3 sec off) • Battery critical low = Blinking mode Orange (1 sec on, 1 sec off)
Back up state	Back up active = Blue
Arcade module state	Arcade module active = Blue

System DMA Specification

Legacy Mode	Power Management
DMA0	Not applicable
DMA1*	Not applicable
DMA2*	Not applicable
DMA3	Not applicable
DMA4	Direct memory access controller
DMA5*	Not applicable
DMA6	Not applicable
DMA7	Not applicable

*ExpressCard controller can use DMA 1, 2, or 5.

System Interrupt Specification

Hardware IRQ	System Function
IRQ00	System timer
IRQ01	Standard PS/2 Keyboard
IRQ08	System CMOS/real time clock
IRQ10	Intel(R) 7 Series/C216 Chipset Family SMBus Host Controller - 1E22
IRQ12	Synaptics PS/2 Port Touchpad
IRQ13	Numeric data processor
IRQ16	<ul style="list-style-type: none"> Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E2D Intel(R) Management Engine Interface NVIDIA GeForce GT 620M Xeon E3-1200/2nd Generation Intel(R) Core(TM) Processor Family PCI Express Root Port - 0101 Xeon E3-1200/2nd Generation Intel(R) Core(TM) Processor Family PCI Express Controller - 0105
IRQ17	Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 1 - 1E10
IRQ18	Intel(R) 7 Series/C216 Chipset Family PCI Express Root Port 3 - 1E14
IRQ19	<ul style="list-style-type: none"> Broadcom 802.11n Network Adapter #2 Intel(R) 7 Series Chipset Family SATA AHCI Controller
IRQ22	High Definition Audio Controller
IRQ23	Intel(R) 7 Series/C216 Chipset Family USB Enhanced Host Controller - 1E26
IRQ81	Microsoft ACPI-Compliant System
IRQ82	Microsoft ACPI-Compliant System
IRQ83	Microsoft ACPI-Compliant System
IRQ84	Microsoft ACPI-Compliant System
IRQ85	Microsoft ACPI-Compliant System
IRQ86	Microsoft ACPI-Compliant System
IRQ87	Microsoft ACPI-Compliant System
IRQ88	Microsoft ACPI-Compliant System
IRQ89	Microsoft ACPI-Compliant System
IRQ90	Microsoft ACPI-Compliant System
IRQ91	Microsoft ACPI-Compliant System
IRQ92	Microsoft ACPI-Compliant System
IRQ93	Microsoft ACPI-Compliant System
IRQ94	Microsoft ACPI-Compliant System

System Interrupt Specification (Continued)

Hardware IRQ	System Function
IRQ95	Microsoft ACPI-Compliant System
IRQ96	Microsoft ACPI-Compliant System
IRQ97	Microsoft ACPI-Compliant System
IRQ98	Microsoft ACPI-Compliant System
IRQ99	Microsoft ACPI-Compliant System
IRQ100	Microsoft ACPI-Compliant System
IRQ101	Microsoft ACPI-Compliant System
IRQ102	Microsoft ACPI-Compliant System
IRQ103	Microsoft ACPI-Compliant System
IRQ104	Microsoft ACPI-Compliant System
IRQ105	Microsoft ACPI-Compliant System
IRQ106	Microsoft ACPI-Compliant System
IRQ107	Microsoft ACPI-Compliant System
IRQ108	Microsoft ACPI-Compliant System
IRQ109	Microsoft ACPI-Compliant System
IRQ110	Microsoft ACPI-Compliant System
IRQ111	Microsoft ACPI-Compliant System
IRQ112	Microsoft ACPI-Compliant System
IRQ113	Microsoft ACPI-Compliant System
IRQ114	Microsoft ACPI-Compliant System
IRQ115	Microsoft ACPI-Compliant System
IRQ116	Microsoft ACPI-Compliant System
IRQ117	Microsoft ACPI-Compliant System
IRQ118	Microsoft ACPI-Compliant System
IRQ119	Microsoft ACPI-Compliant System
IRQ120	Microsoft ACPI-Compliant System
IRQ121	Microsoft ACPI-Compliant System
IRQ122	Microsoft ACPI-Compliant System
IRQ123	Microsoft ACPI-Compliant System
IRQ124	Microsoft ACPI-Compliant System
IRQ125	Microsoft ACPI-Compliant System
IRQ126	Microsoft ACPI-Compliant System

System Interrupt Specification (Continued)

Hardware IRQ	System Function
IRQ127	Microsoft ACPI-Compliant System
IRQ128	Microsoft ACPI-Compliant System
IRQ129	Microsoft ACPI-Compliant System
IRQ130	Microsoft ACPI-Compliant System
IRQ131	Microsoft ACPI-Compliant System
IRQ132	Microsoft ACPI-Compliant System
IRQ133	Microsoft ACPI-Compliant System
IRQ134	Microsoft ACPI-Compliant System
IRQ135	Microsoft ACPI-Compliant System
IRQ136	Microsoft ACPI-Compliant System
IRQ137	Microsoft ACPI-Compliant System
IRQ138	Microsoft ACPI-Compliant System
IRQ139	Microsoft ACPI-Compliant System
IRQ140	Microsoft ACPI-Compliant System
IRQ141	Microsoft ACPI-Compliant System
IRQ142	Microsoft ACPI-Compliant System
IRQ143	Microsoft ACPI-Compliant System
IRQ144	Microsoft ACPI-Compliant System
IRQ145	Microsoft ACPI-Compliant System
IRQ146	Microsoft ACPI-Compliant System
IRQ147	Microsoft ACPI-Compliant System
IRQ148	Microsoft ACPI-Compliant System
IRQ149	Microsoft ACPI-Compliant System
IRQ150	Microsoft ACPI-Compliant System
IRQ151	Microsoft ACPI-Compliant System
IRQ152	Microsoft ACPI-Compliant System
IRQ153	Microsoft ACPI-Compliant System
IRQ154	Microsoft ACPI-Compliant System
IRQ155	Microsoft ACPI-Compliant System
IRQ156	Microsoft ACPI-Compliant System
IRQ157	Microsoft ACPI-Compliant System
IRQ158	Microsoft ACPI-Compliant System

System Interrupt Specification (Continued)

Hardware IRQ	System Function
IRQ159	Microsoft ACPI-Compliant System
IRQ160	Microsoft ACPI-Compliant System
IRQ161	Microsoft ACPI-Compliant System
IRQ162	Microsoft ACPI-Compliant System
IRQ163	Microsoft ACPI-Compliant System
IRQ164	Microsoft ACPI-Compliant System
IRQ165	Microsoft ACPI-Compliant System
IRQ166	Microsoft ACPI-Compliant System
IRQ167	Microsoft ACPI-Compliant System
IRQ168	Microsoft ACPI-Compliant System
IRQ169	Microsoft ACPI-Compliant System
IRQ170	Microsoft ACPI-Compliant System
IRQ171	Microsoft ACPI-Compliant System
IRQ172	Microsoft ACPI-Compliant System
IRQ173	Microsoft ACPI-Compliant System
IRQ174	Microsoft ACPI-Compliant System
IRQ175	Microsoft ACPI-Compliant System
IRQ176	Microsoft ACPI-Compliant System
IRQ177	Microsoft ACPI-Compliant System
IRQ178	Microsoft ACPI-Compliant System
IRQ179	Microsoft ACPI-Compliant System
IRQ180	Microsoft ACPI-Compliant System
IRQ181	Microsoft ACPI-Compliant System
IRQ182	Microsoft ACPI-Compliant System
IRQ183	Microsoft ACPI-Compliant System
IRQ184	Microsoft ACPI-Compliant System
IRQ185	Microsoft ACPI-Compliant System
IRQ186	Microsoft ACPI-Compliant System
IRQ187	Microsoft ACPI-Compliant System
IRQ188	Microsoft ACPI-Compliant System
IRQ189	Microsoft ACPI-Compliant System
IRQ190	Microsoft ACPI-Compliant System

System Interrupt Specification (Continued)

Hardware IRQ	System Function
IRQ-2	Intel(R) 7 series/C216 Chipset Family PCI Express Root Port 8 - 1E1E
IRQ-3	Intel(R) HD Graphics Family
IRQ-4	Realtek PCIE CardReader
IRQ-5	Realtek PCIe GBE Family Controller

System I/O Address Map

I/O address (hex)	System Function (shipping configuration)
0000 - 001F	Direct memory access controller
0000 - 0CF7	PCI bus
0020 - 0021	Programmable interrupt controller
0024 - 0025	Programmable interrupt controller
0028 - 0029	Programmable interrupt controller
002C - 002D	Programmable interrupt controller
002E - 002F	Motherboard resources
0030 - 0031	Programmable interrupt controller
0034 - 0035	Programmable interrupt controller
0038 - 0039	Programmable interrupt controller
003C - 003D	Programmable interrupt controller
0040 - 0043	System timer
004E - 004F	Motherboard resources
0050 - 0053	System timer
0060 - 0060	Standard PS/2 Keyboard
0061 - 0061	Motherboard resources
0062 - 0062	Microsoft ACPI-Compliant Embedded
0063 - 0063	Motherboard resources
0064 - 0064	Standard PS/2 Keyboard
0065 - 0065	Motherboard resources
0066 - 0066	Microsoft ACPI-Compliant Embedded
0067 - 0067	Motherboard resources
0070 - 0070	Motherboard resources
0070 - 0077	System CMOS/real time clock
0080 - 0080	Motherboard resources
0081 - 0091	Direct memory access controller
0092 - 0092	Motherboard resources
0093 - 009F	Direct memory access controller
00A0 - 00A1	Programmable interrupt controller
00A4 - 00A5	Programmable interrupt controller
00A8 - 00A9	Programmable interrupt controller
00AC - 00AD	Programmable interrupt controller

System I/O Address Map (Continued)

I/O address (hex)	System Function (shipping configuration)
00B0 - 00B1	Programmable interrupt controller
00B2 - 00B3	Motherboard resources
00B4 - 00B5	Programmable interrupt controller
00B8 - 00B9	Programmable interrupt controller
00BC - 00BD	Programmable interrupt controller
00C0 - 00DF	Direct memory access controller
00F0 - 00F0	Numeric data processor
03B0 - 03BB	Intel(R) HD Graphics Family
03C0 - 03DF	Intel(R) HD Graphics Family
0400 - 0453	Motherboard resources
0454 - 0457	Motherboard resources
0458 - 047F	Motherboard resources
04D0 - 04D1	Programmable interrupt controller
0500 - 057F	Motherboard resources
0680 - 069F	Motherboard resources
0D00 - FFFF	PCI bus
1000 - 100F	Motherboard resources
164E -164F	Motherboard resources
2000 - 20FF	Realtek PCIe GBE Family Controller
2000 - 2FFF	Intel(R) 7 Series/C216 Series Chipset Family PCI Express Root Port 3 - 1E14
3000 - 307F	NVIDIA GeForce GT 620M
3000 - 3FFF	Xeon E3-1200/2nd Generation Intel(R) Core(TM) Processor Family PCI Express Root Port - 0101
4000 - 403F	Intel(R) HD Graphics Family
4040 - 405F	Intel(R) 7 Series/C216 Series Chipset Family SMBus Host Controller - 1E22
4060 - 407F	Intel(R) 7 Series Chipset Family SATA AHCI Controller
4080 - 4087	Intel(R) 7 Series Chipset Family SATA AHCI Controller
4088 - 408F	Intel(R) 7 Series Chipset Family SATA AHCI Controller
4049 - 4093	Intel(R) 7 Series Chipset Family SATA AHCI Controller
4094 - 4097	Intel(R) 7 Series Chipset Family SATA AHCI Controller
FFFF - FFFF	Motherboard resources
FFFF - FFFF	Motherboard resources

CHAPTER 2

System Utilities

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System Utilities

BIOS Setup Utility

This utility is a hardware configuration program built into a computer's BIOS (Basic Input/Output System).

The utility is pre-configured and optimized so most users do not need to run it. If configuration problems occur, the setup utility may need to be run. Refer to [Chapter 4, Troubleshooting](#) when a problem arises.

To activate the utility, press **F2** during POST (power-on self-test) when prompted at the bottom of screen.

The default parameter of **F12 Boot Menu** is set to **Disabled**. To change the boot device without entering *BIOS Setup Utility*, set the parameter to **Enabled**.

To change the boot device without entering the BIOS SETUP, press **F12** during POST to enter the multi-boot menu.

Navigating the BIOS Utility

Six menu options are:

- Information
- Main
- Security
- Boot
- Exit

To navigate through the following:

- Menu - use the left and right arrow keys
- Item - use the up and down arrow keys
- Change parameter value - press **F5** or **F6**.
- Exit - Press **Esc**
- Load default settings - press **F9**. Press **F10** to save changes and exit BIOS Setup Utility

⇒ NOTE:

Parameter values can be changed if enclosed in square brackets open the DIMM door open the DIMM door[]. Navigation keys appear at the bottom of the screen. Read parameter help carefully when making changes to parameter values. Parameter help is found in the Item Specific Help area of the screen.

⇒ NOTE:

System information is subject to specific models.

BIOS

The following is a description of the tabs found on the *InsydeH20 BIOS Setup Utility* screen:

⇒ NOTE:

The screens provided are for reference only. Actual values may differ by model.

Information

The Information tab shows a summary of computer hardware information.

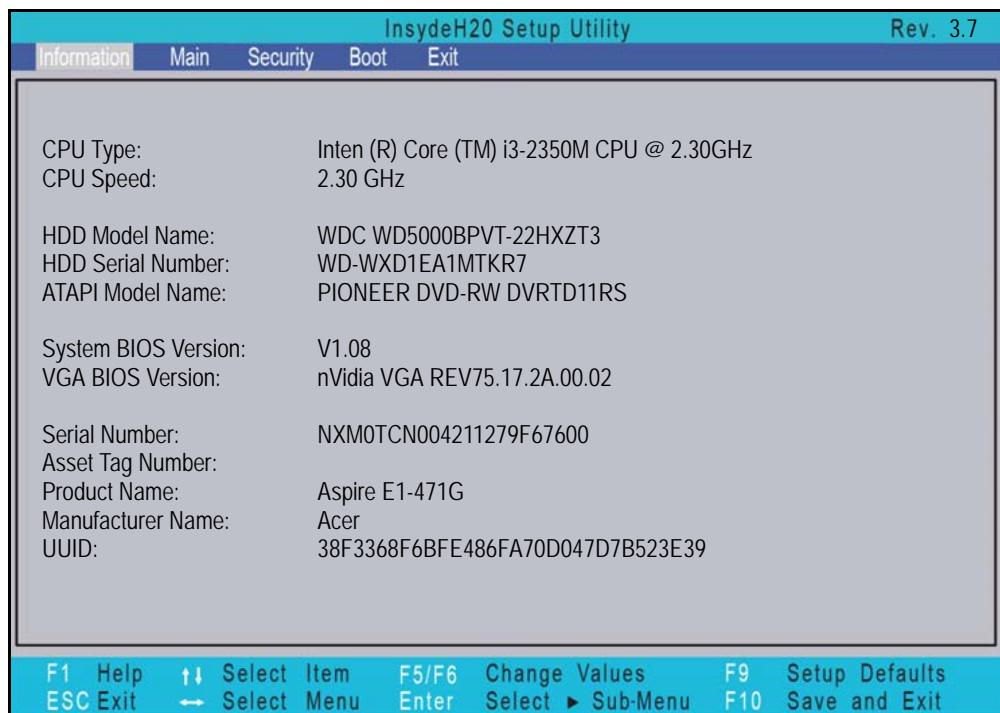


Figure 2-1. BIOS Information

Table 2-1 describes the parameters shown in [Figure 2-1](#).

Table 2-1. BIOS Information

Parameter	Description
CPU Type	CPU (central processing unit) type and speed of system
CPU Speed	Speed of the CPU
HDD Model Name	Model name of HDD (hard disk drive) installed on primary IDE master
HDD Serial Number	Serial number of HDD installed on primary IDE master
ATAPI Model Name	Model name of Optical device installed in system

Table 2-1. BIOS Information (Continued)

Parameter	Description
System BIOS Version	System BIOS version
VGA BIOS Version	VGA (video graphics array) firmware version of system
Serial Number	Serial number of unit
Asset Tag Number	Asset tag number of system
Product Name	Product name of the system
Manufacturer Name	Manufacturer of system
UUID	Universally Unique Identifier

Main

The Main tab allows the user to set system time and date, enable or disable boot option and enable or disable recovery.

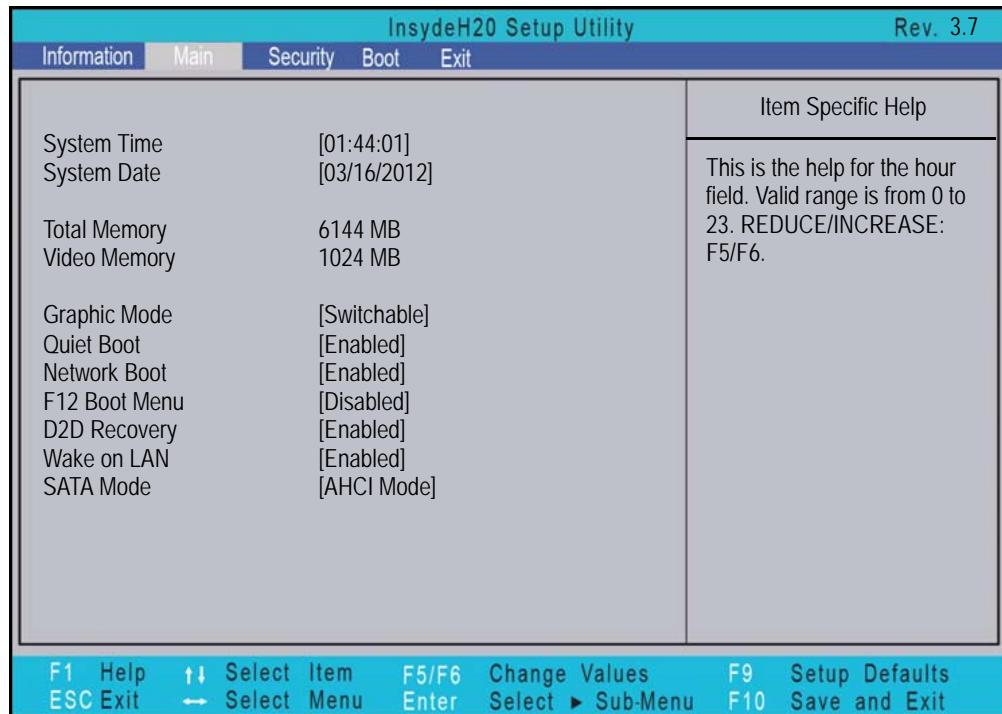


Figure 2-2. BIOS Main

Table 2-2 describes the parameters shown in [Figure 2-2](#).

Table 2-2. BIOS Main

Parameter	Description	Format/Option
System Time	BIOS system time in 24-hour format	Format: HH:MM:SS (hour:minute:second)
System Date	BIOS system date	Format MM/DD/YYYY (month/day/year)
Total Memory	Total memory available	N/A
Video Memory	Available memory for video	N/A
Graphic Mode	Shows graphic mode options	Option: Switchable or Discrete
Quiet Boot	Shows OEM (original equipment manufacturer) screen during system boot instead of traditional POST screen	Option: Enabled or Disabled
Network Boot	Option to boot system from LAN (local area network)	Option: Enabled or Disabled

Table 2-2. BIOS Main (Continued)

Parameter	Description	Format/Option
F12 Boot Menu	Option to use boot menu during POST	Option: Enabled or Disabled
D2D Recovery	Option to use D2D Recovery function	Option: Enabled or Disabled
Wake on LAN	Option to use Wake-on-LAN feature	Option: Enabled or Disabled
SATA Mode	Option to set SATA controller mode	Option: AHCI or IDE

Security

The Security tab shows parameters that safeguard and protect the computer from unauthorized use.

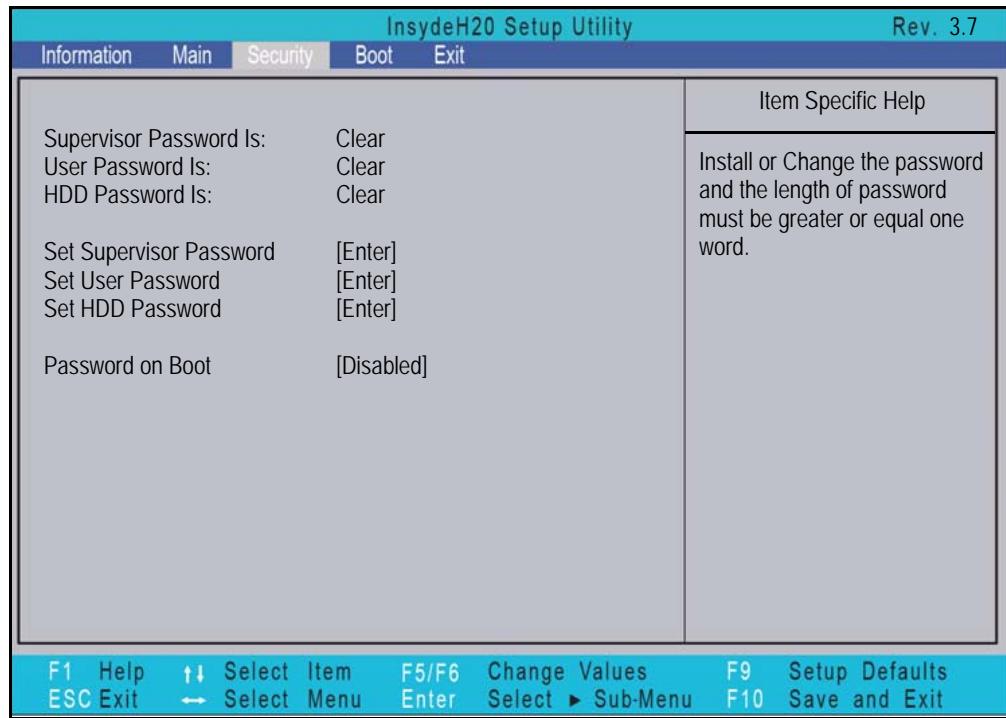


Figure 2-3. BIOS Security

Table 2-3 describes the parameters shown in [Figure 2-3](#).

Table 2-3. BIOS Security

Parameter	Description	Option
Supervisor Password Is	Supervisor password setting	Clear or Set
User Password Is	User password setting	Clear or Set
HDD Password Is	HDD password setting	Clear or Set
Set Supervisor Password	Option to set supervisor password	N/A
Set User Password	Option to set user password	N/A
Set HDD Password	Option to set HDD password	N/A

Table 2-3. BIOS Security (Continued)

Parameter	Description	Option
Password on Boot	Shows if password is required during system boot ⚠ CAUTION: If Password-on-Boot authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure. Refer to Crisis Disk Recovery .	Disabled or Enabled

⇒ **NOTE:**

When prompted to enter password, three attempts are allowed before system halts. Resetting BIOS password may require computer be returned to dealer.

Setting a Password

Perform the following to set user or supervisor passwords:

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press **Enter**. The Set Supervisor Password dialog box appears.

⇒ **NOTE:**

To change an existing password, refer to [Changing a Password](#).



Figure 2-4. Set Supervisor Password

2. Type a new password in the Enter New Password field. Passwords are not case sensitive and the length must not exceed 12 alphanumeric characters (A-Z, a-z, 0-9). Retype the password in the Confirm New Password field.

+ **IMPORTANT:**

Use care when typing a password. Characters do not appear on the screen.

3. Press **Enter**. After setting the password, the computer sets the User Password parameter to Set.

⇒ **NOTE:**

Password on Boot must be set to Enabled to activate password feature.

4. Press **F10** to save changes and exit BIOS Setup Utility.

Removing a Password

Perform the following:

1. Use the **↑** and **↓** keys to highlight Set Supervisor Password and press **Enter**. The Set Supervisor Password dialog box appears:



Figure 2-5. Set Supervisor Password

2. Type current password in Enter Current Password field and press **Enter**.
3. Press **Enter** twice without typing anything in Enter New Password and Confirm New Password fields. Computer will set Supervisor Password parameter to Clear.
4. Press **F10** to save changes and exit the *BIOS Setup Utility*.

Changing a Password

1. Use the **↑** and **↓** keys to highlight Set Supervisor Password and press **Enter**. The Set Supervisor Password dialog box appears.



Figure 2-6. Set Supervisor Password

2. Type current password in Enter Current Password field and press **Enter**.
3. Type new password in Enter New Password field. Retype new password in Confirm New Password field.
4. Press **Enter**. Computer sets Supervisor Password parameter to Set.

⇒ NOTE:

Password on Boot must be set to Enabled to activate the password feature.

5. Press **F10** to save changes and exit *BIOS Setup Utility*.

If the verification is OK, the screen will show as follows.

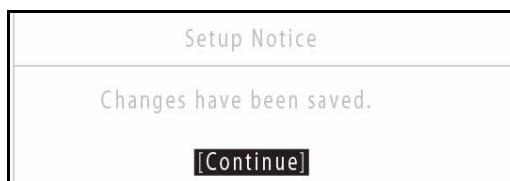


Figure 2-7. Setup Notice

The password setting is complete after the user presses *Enter*.

If the password entered does not match the current password, the screen shows the Setup Warning dialog. ([Figure 2-8](#))



Figure 2-8. Setup Warning: Invalid Password

If new password and confirm new password strings do not match, the Setup Warning dialog appears ([Figure 2-9](#)).



Figure 2-9. Setup Warning: Passwords Do Not Match

Boot

The Boot tab allows changes to the order of boot devices used to load the operating system. Bootable devices include the:

- USB diskette drives
- Onboard hard disk drive
- DVD drive in the module bay

Use **↑** and **↓** keys to select a device and press **F5** or **F6** to change the value.

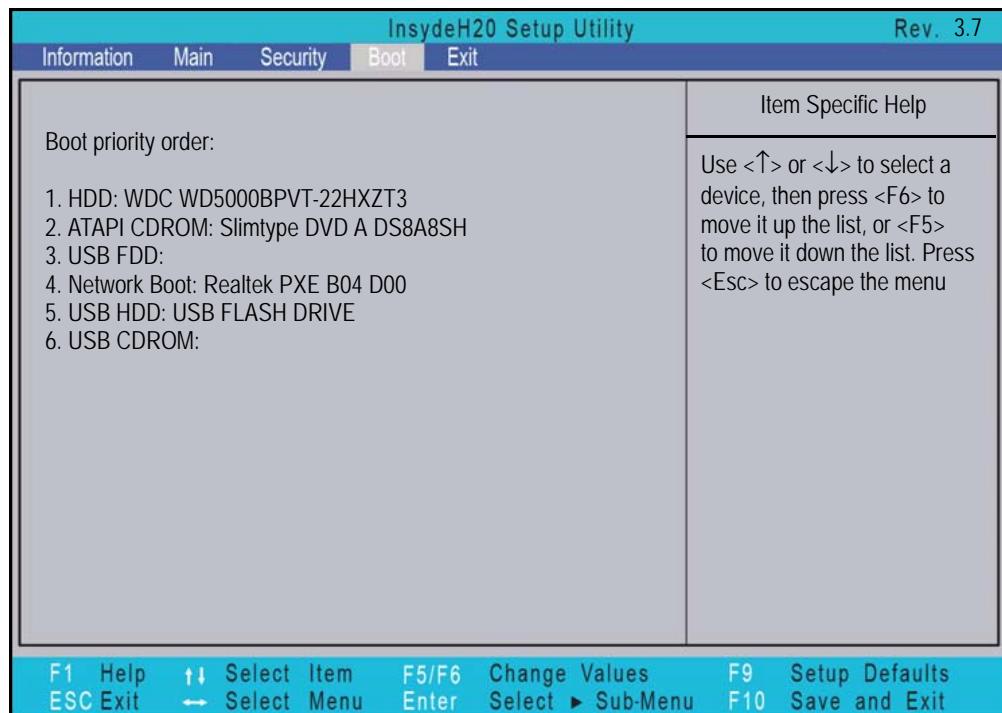


Figure 2-10. BIOS Boot

Exit

The Exit tab allows users to save or discard changes and quit the *BIOS Setup Utility*.

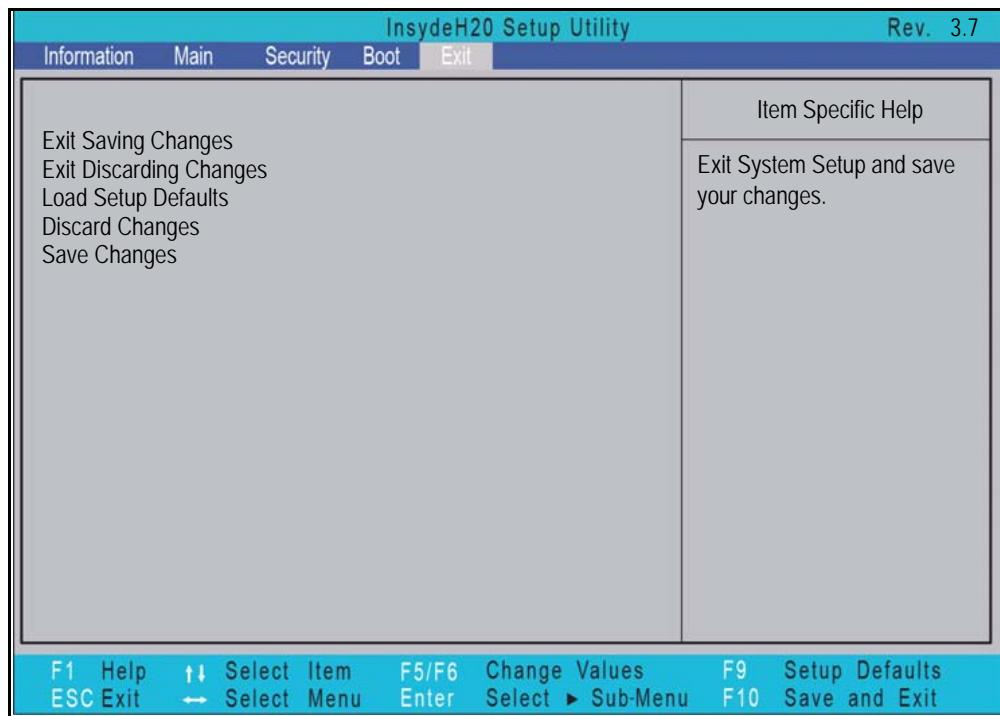


Figure 2-11. BIOS Exit

Table 2-4 describes the parameters in [Figure 2-11](#).

Table 2-4. Exit Parameters

Parameter	Description
Exit Saving Changes	Exit BIOS utility and save setup item changes to system.
Exit Discarding Changes	Exit BIOS utility without saving setup item changes to system.
Load Setup Defaults	Load setup default values for all setup items.
Discard Changes	Load previous values of all setup items.
Save Changes	Save setup item changes to system without exiting.

BIOS Flash Utilities

BIOS Flash memory updates are required for the following conditions:

- New versions of system programs
- New features or options
- Restore a BIOS when it becomes corrupted.

Use the Flash utility to update the system BIOS Flash ROM.

⇒ NOTE:

If a Crisis Recovery Disc is not available, create one before Flash utility is used.

⇒ NOTE:

Do not install memory related drivers (XMS, EMS, DPMI) when Flash is used.

⇒ NOTE:

Use AC adaptor power supply when running Flash utility. If battery pack does not contain power to finish loading BIOS Flash, do not boot system.

Perform the following to run Flash.

1. Prepare a bootable USB HDD.
2. Copy *Flash Utility* to bootable USB HDD.
3. Boot system from bootable USB HDD.

⇒ NOTE:

Flash utility has auto execution function.

DOS Flash Utility

Perform the following to use the *DOS Flash Utility*:

1. Press **F2** during boot to enter Setup Menu.
2. Select Boot Menu to modify boot priority order.

Example: If using USB HDD to Update BIOS, move USB HDD to position 1.

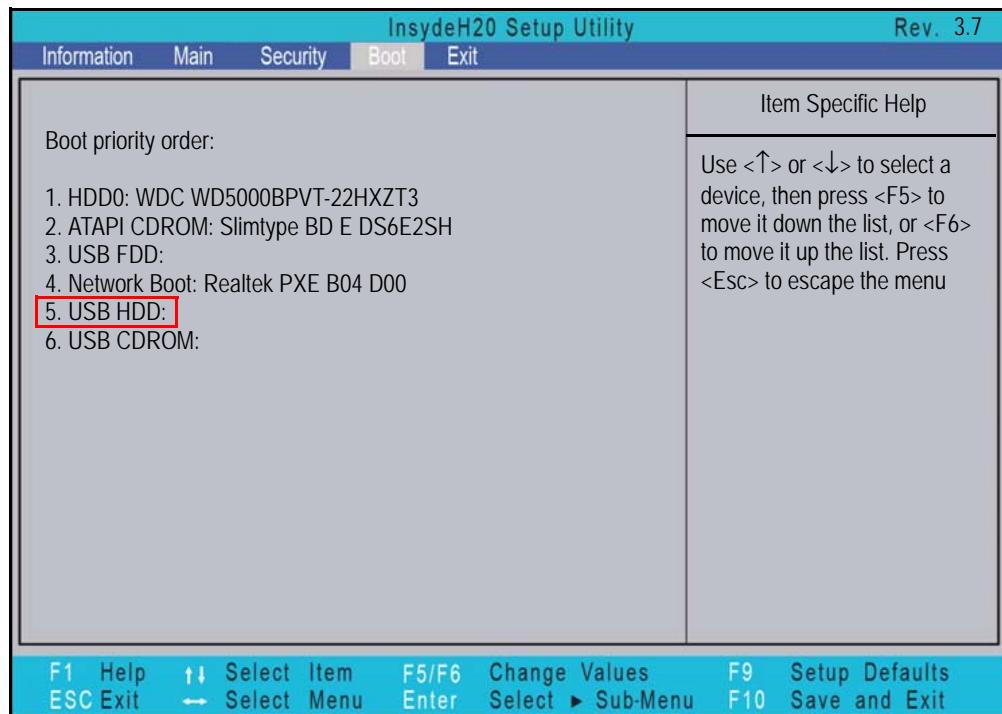


Figure 2-12. BIOS Boot

3. Copy *ZQS_108.EXE* to a bootable USB HDD.
4. Insert the USB HDD and reboot computer.
5. Execute *ZQS_108.EXE* under DOS mode to update BIOS.
6. Flash process begins as shown in [Figure 2-13](#).

```
C:\>zqs_108
Reading file...
Flash package mode.
Option: /bios/ecbp

Please do not remove the AC power!

Insyde Flash Utility for InsydeH20
Version 1.06c

Initializing

Current BIOS Model name : ZQS
New    BIOS Model name : ZQS

Current BIOS version : V1.06
New    BIOS version : V1.08
```

Figure 2-13. DOS Flash Process

7. Flash is complete when the message, Flash Programming Complete is shown. System will restart automatically when finished.

⇒ NOTE:

If AC power is not connected, the following message is shown (Figure 2-14). Plug in the AC power to continue.

```
C:\>zqs_108
Reading file...
Flash package mode.
Option: /bios/ecbp

Warning: No AC power connect
```

Figure 2-14. AC Power Warning

WinFlash Utility

Perform the following to use the *WinFlash Utility*:

1. Copy the WinFlash executable *ZQS_108W.EXE* to desktop.
2. Double-click the *ZQS_108W.EXE* to start the flash process.
3. Click *OK* to begin update. A progress screen is shown as [Figure 2-15](#).
4. System will restart automatically when the Flash Process finished.

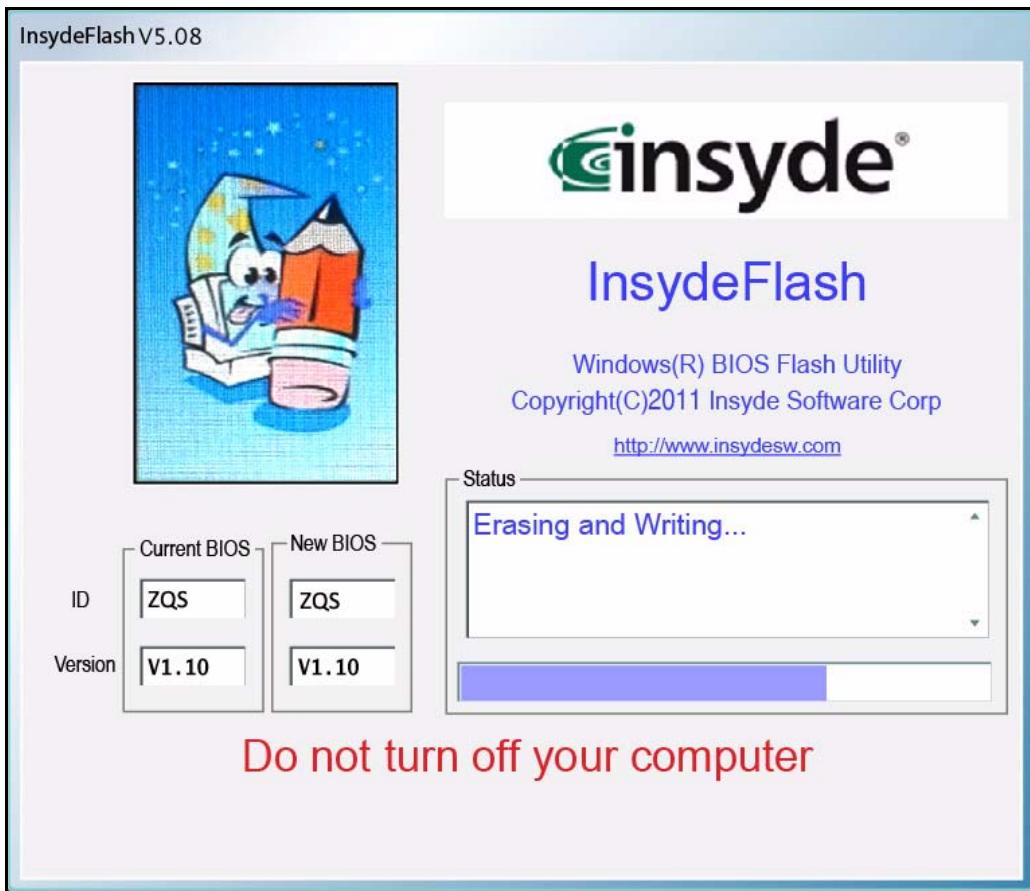


Figure 2-15. InsydeFlash

⇒ **NOTE:**

This feature is only functional when the AC power adapter is connected. It is recommended to have the AC adapter and Battery present when using WinFlash Utility.

Clearing BIOS Passwords

⚠ CAUTION:

If Password-on-Boot authentication is enabled, the BIOS password can only be cleared by initiating the Crisis Disk Recovery procedure or flashing the BIOS. See [Crisis Disk Recovery](#).

This section provides details about removing Insyde HDD/BIOS passwords.

Clear the BIOS Password as follows:

⇒ NOTE:

If the BIOS password is incorrectly entered three times, an error is generated. ([Figure 2-16](#))

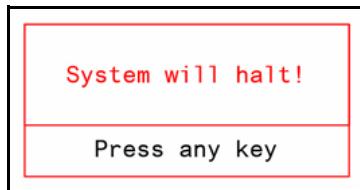


Figure 2-16. Password Error Status

To reset the BIOS password, perform the following:

1. Press any key to exit the menu.
2. In DOS mode, execute ***ClearPwd.exe***.

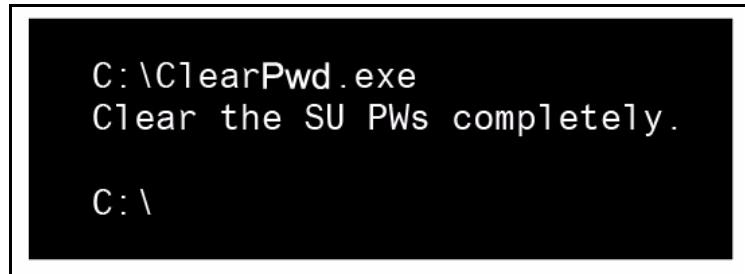


Figure 2-17. Clear BIOS Password

3. When message **Clear the SU Pws completely** is displayed, the BIOS password has been cleaned up.

Removing Insyde BIOS Passwords

The BIOS password can only be removed by software utility.

To reset the BIOS password, perform the following:

1. Press **Power** button.
2. Press **/** key before Acer logo disappears (Figure 2-18).

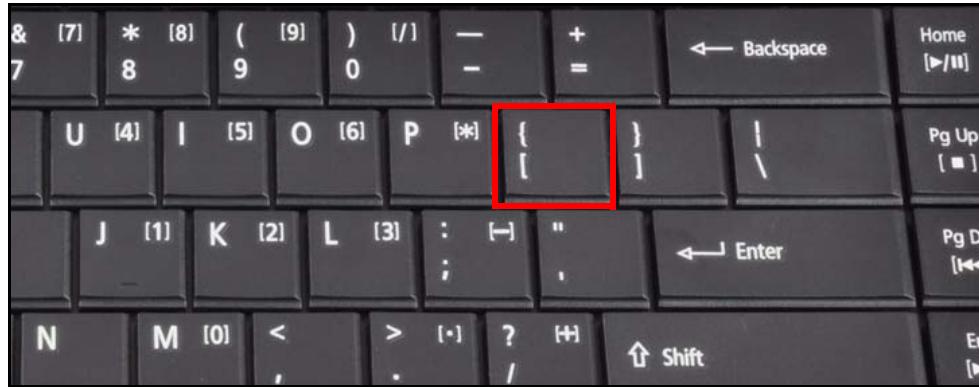


Figure 2-18. Keyboard Key Location

3. Select Boot Option item 'USB HDD' as highlighted in Figure 2-19 and press **Enter** to exit the BIOS Boot Option menu.

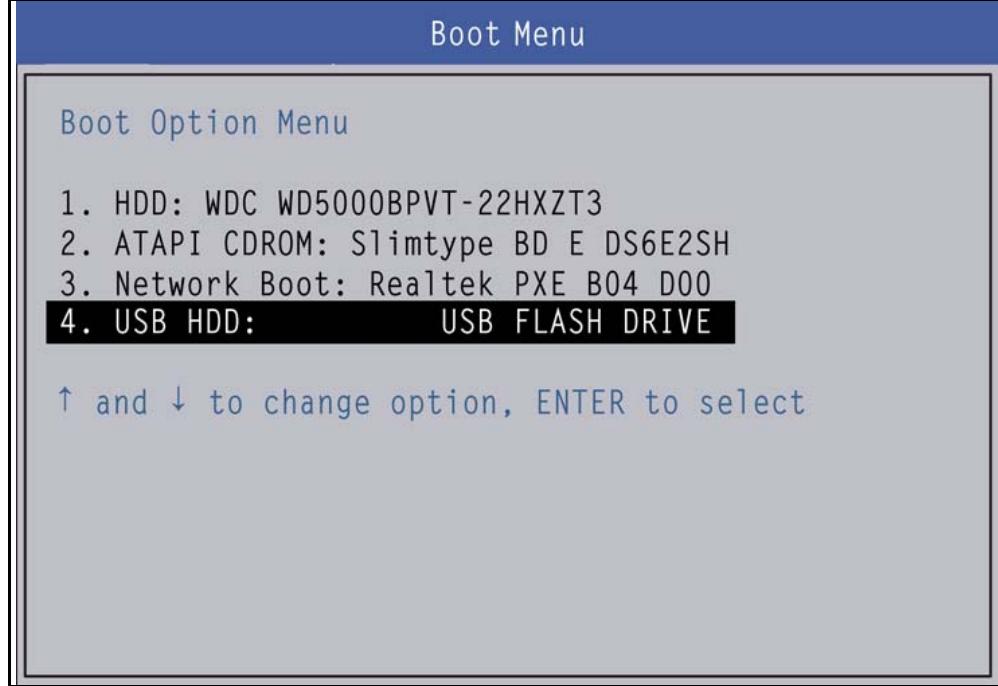


Figure 2-19. BIOS Boot Option Meun

4. Execute **ClearPwd.EXE** under the DOS mode. Refer to Figure 2-21
5. When message **Clear the SU Pws completely** is displayed, supervisor password has been removed.

⚠ CAUTION:

If BIOS Security menu item Password on Boot is set to Enabled, the BIOS password can only be cleared by the Crisis Disk Recovery procedure. (The default parameter of Password on Boot is set to Disabled.)

If wrong Supervisor Password is entered three times, the message System will halt! is displayed on screen (Figure 2-20).

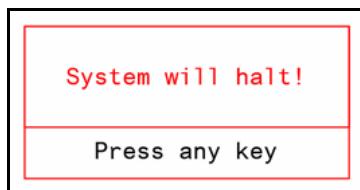


Figure 2-20. Supervisor Password Error

If user is unable to obtain correct password then it must be unlocked. There are two methods to do this.

Method 1:

If BIOS Security menu item 'Supervisor Password Is' and 'User Password Is' has been set to Set and 'Password on Boot' is set to Enabled, then Crisis Recovery disc must be used.

Method 2:

If BIOS menu item Password on Boot is set to Disabled.

1. Press any key to exit the menu.
2. Refer to [Removing Insyde BIOS Passwords](#).
3. In DOS mode, execute **ClearPwd.EXE**.

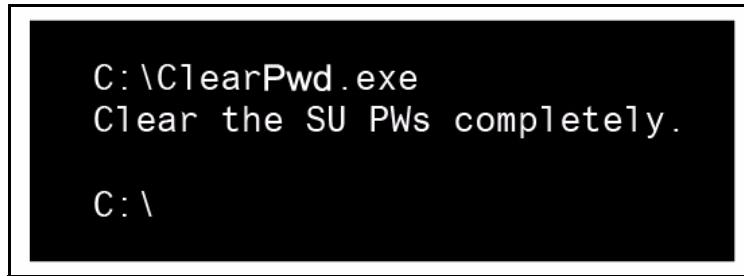


Figure 2-21. Clear Supervisor Password

4. When message Clear the SU Pws completely is displayed, supervisor password has been removed.

Removing Insyde HDD Password

Clear the BIOS Password as follows:

To reset the BIOS password, perform the following:

1. When the user keys in the wrong password three times, the system reports the error code:

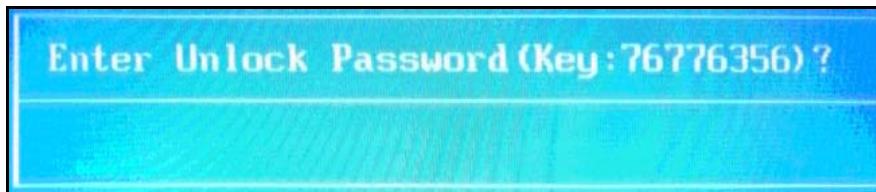


Figure 2-22. Unlock Password Prompt

2. In DOS mode, execute `UnlockHD.exe XXXXX` (where XXXXX is the Unlock password error code; example here is 76776356). The `exe` will generate an unlock password (example here is 69654998).

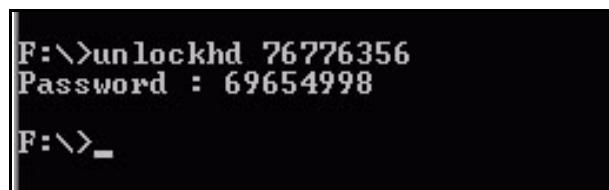


Figure 2-23. UnlockHD.exe

3. The `exe` will generate a unlock password. Enter this generated unlock password at the prompt.

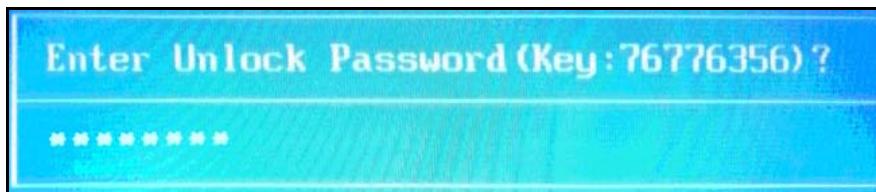


Figure 2-24. Enter Unlock Password

Miscellaneous Tools

Using DMI Tools

The DMI (Desktop Management Interface) Tool copies BIOS information to EEPROM (Electrically Erasable Programmable Read-Only Memory). Used in the DMI pool for hardware management.

When the BIOS shows Verifying DMI pool data, it is checking that the table correlates with the hardware before sending information to the operating system (Windows, etc.).

To update the DMI Pool, perform the following:

1. Copy *qdmi301.EXE* and *VEEPROM.EXE* to a bootable USB Flash Drive.
2. Boot system from the bootable USB Flash Drive.
3. Boot to DOS.
4. Type *qdmi301* and click **Enter**. To execute a specific function, select the associated menu number.

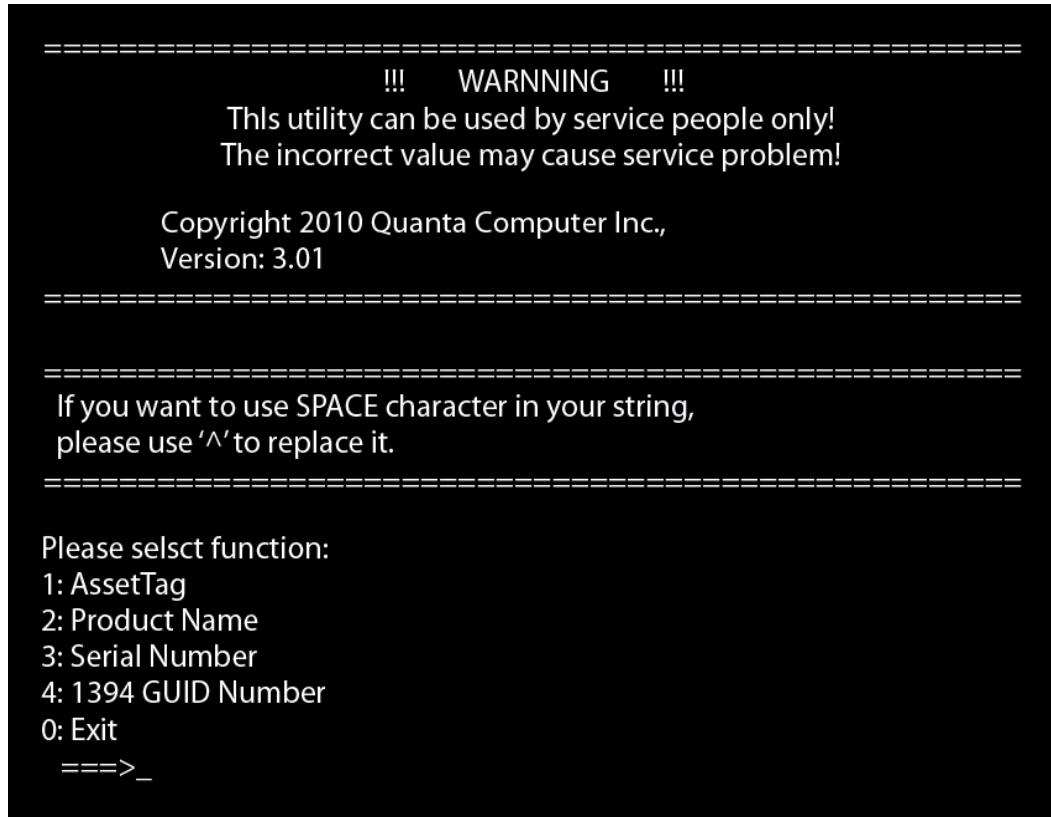


Figure 2-25. DMI Tools Main Menu Screen

5. Press **1** to modify the asset tag key.

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
====>1
!!! The Max length is 32 characters !!!
      1          2          3
      -5---0---5---0---5---0--
AssetTag is :12345678901234567890123456789012
```

Figure 2-26. Asset Tag Menu Item

6. Press **2** to modify the product name, then press **2** again to modify EEPROM spec. version.

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please select function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
====>2

Please select EEPROM spec. version:
1: Before V2.0
2: Equal or After V2.0
====>2
!!! The Max length is 24 characters !!!
      0  1  1  2
      -5---0---5---0---4
Product Name is : Aspire^4230
```

Figure 2-27. Product Name Menu Item

7. Press **3** to modify serial number key.

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please selsct function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
====>3
!!! Tha Max Length is 22 characters !!!
      1          2
      - - - 5 - - 0 - - 5 - - 0 - -
Serial Number is :1234567890123456789012_
```

Figure 2-28. Serial Number Menu Item

8. Press **4** to modify the 1394 GUID number key.

```
=====
If you want to use SPACE character in your string,
please use '^' to replace it.
=====

Please selsct function:
1: AssetTag
2: Product Name
3: Serial Number
4: 1394 GUID Number
0: Exit
====>4
!!! Tha Max Length is 8 characters !!!
      - - - 5 - - 8
1394 GUID Number is :12345678_
```

Figure 2-29. 1394 GUID Number Menu Item

9. Press **0** to exit.

10. At the command prompt, type **VEEPROM** to write any changes in the data to the EEPROM.



C:\>VEEPROM_

Figure 2-30. VEEPROM Command Prompt

⇒ NOTE:

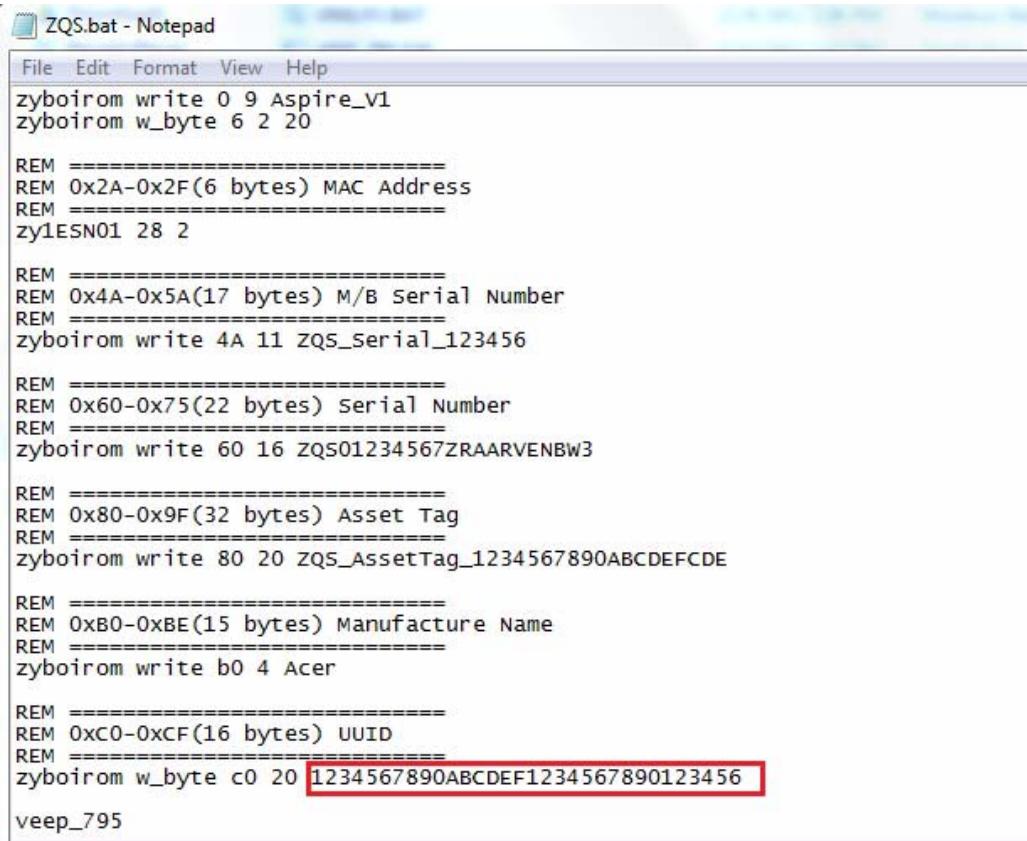
When using any of the write options, restart the system to make the new DMI data effective.

Using UUIDTools

The UUID (Universally Unique Identifier) Tool copies BIOS information to EEPROM (Electrically Erasable Programmable Read-Only Memory). Used in the DMI pool data for hardware management.

To use *UUID* to update the DMI Pool, perform the following:

1. Unzip UUID package tool, *ZQS.zip*, to a bootable USB Flash Disk.
2. Edit *ZQS.bat* file with Windows Notepad under the ZQS folder. (Figure 2-31)



```
ZQS.bat - Notepad
File Edit Format View Help
zyboirom write 0 9 Aspire_v1
zyboirom w_byte 6 2 20

REM =====
REM 0x2A-0x2F(6 bytes) MAC Address
REM =====
zy1ESN01 28 2

REM =====
REM 0x4A-0x5A(17 bytes) M/B Serial Number
REM =====
zyboirom write 4A 11 ZQS_Serial_123456

REM =====
REM 0x60-0x75(22 bytes) Serial Number
REM =====
zyboirom write 60 16 ZQS01234567ZRAARVENBW3

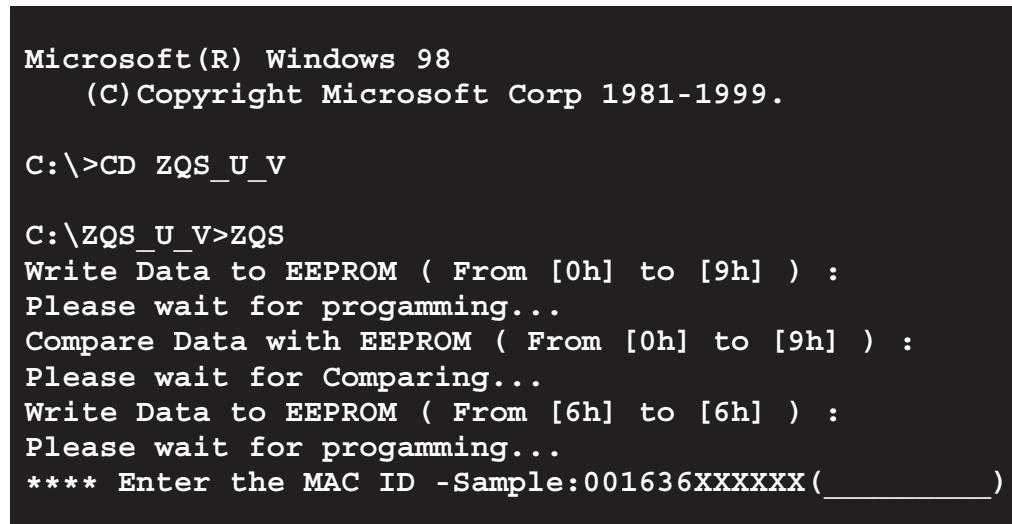
REM =====
REM 0x80-0x9F(32 bytes) Asset Tag
REM =====
zyboirom write 80 20 ZQS_AssetTag_1234567890ABCDEFCDE

REM =====
REM 0xB0-0xBE(15 bytes) Manufacture Name
REM =====
zyboirom write b0 4 Acer

REM =====
REM 0xC0-0xCF(16 bytes) UUID
REM =====
zyboirom w_byte c0 20 1234567890ABCDEF1234567890123456
veep_795
```

Figure 2-31. Editing the UUID File

3. Boot from USB and execute *ZQS.bat* under DOS mode. (Figure 2-32)



```
Microsoft (R) Windows 98
(C) Copyright Microsoft Corp 1981-1999.

C:\>CD ZQS_U_V

C:\ZQS_U_V>ZQS
Write Data to EEPROM ( From [0h] to [9h] ) :
Please wait for progamming...
Compare Data with EEPROM ( From [0h] to [9h] ) :
Please wait for Comparing...
Write Data to EEPROM ( From [6h] to [6h] ) :
Please wait for progamming...
**** Enter the MAC ID -Sample:001636XXXXXX(_____)
```

Figure 2-32. UUID

4. At the command prompt, run *VEEPROM.EXE* to write any changes in the data to the EEPROM.

Using the LAN MAC EEPROM Utility

Perform the following steps to write MAC (Media Access Control) information to EEPROM:

Use *LAN.BAT* utility to write MAC values to EEPROM under DOS mode.

1. Get into a MS-DOS prompt and enter *ipconfig /all* to get 'MAC address' (MAC address is the 16 digit number given as Physical Address).
2. Run the *LAN.BAT* file.
3. Enter the 'MAC address' to write MAC values. Flash process begins as shown as follow:

Enter the MAC ID - Samle: 001636XXXXXX(_____) : **001636558899**

Please waiting for EEPROM data filling

Please waiting for EEPROM data comparing

.....

Current MAC ID of ESN EEPROM : 001636558899

Compare ACER & OEM S/N of ESN EEPROM : PASS

4. Flash is completed when the message, *Compare ACER & OEM S/N of ESN EEPROM: PASS*, is shown.
5. At the command prompt, run *VEEPROM.EXE* to write any changes in the data to the EEPROM.
6. Reboot the system when the process has completed.

Crisis Disk Recovery

1. Plug in the USB flash disk.
2. Select the **Fast Format** option and click **Start**. Then click **Next**.
3. Click **Format** and then **Exit** to complete the operation.
4. Copy the **ZQS.fd** file to the USB flash disk root directory.

⇒ NOTE:

Do not place any other *.fd files to the USB flash disk root directory.

5. Plug in the USB Flash Disk without AC plug.
6. Press **Fn + Esc** keys and then plug in AC power (Don't loose **Fn + Esc** keys). The power button flashes orange.
7. Press **Power** button.
8. Loose **Power** button first but still press **Fn + Esc** keys and hold them down until the power led turns off (about 1-2 seconds).
9. Press **Power** button and the system will enter crisis mode to flash the BIOS (The process takes about 2-3 minutes).

At first running, the LED of USB flash disk will keep glitter about 3-7 minutes and restart after. You could check the BIOS edition is right or not in this time. If correct, the crisis system is set up ready.

CHAPTER 3

Machine Maintenance Procedures



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Machine Maintenance Procedures

Introduction

This chapter contains general information about the computer, a list of tools needed to do the required maintenance and step by step procedures on how to remove and install components from the computer.

General Information

The product previews seen in the following procedures may not represent the final product color or configuration. Cable paths and positioning may also differ from the actual model. During the removal and installation of components, make sure all available cable channels and clips are used and that the cables are installed in the same position.

All prerequisites must be completed prior to starting maintenance.

Recommended Equipment

The following equipment are recommended to do the following maintenance procedures:

- Wrist grounding strap and conductive mat
- Flat screwdriver
- Philips screwdriver
- Plastic tweezers
- Flat plastic pry

Table 3-1. Screw List

Size	Quantity	Acer Part No.
M3.0*3.5 (NI)	4	86.TDY07.003
M2.5*6	23	86.A08V7.004
M2.5*4	15	86.D01V7.001
M2*3	12	86.SA107.001
M2*2	4	86.W4107.002

Maintenance Flowchart

The flowchart in [Figure 3-1](#) shows a graphic representation of the module removal and installation sequences. It shows information on what components may need to be removed and installed during servicing.

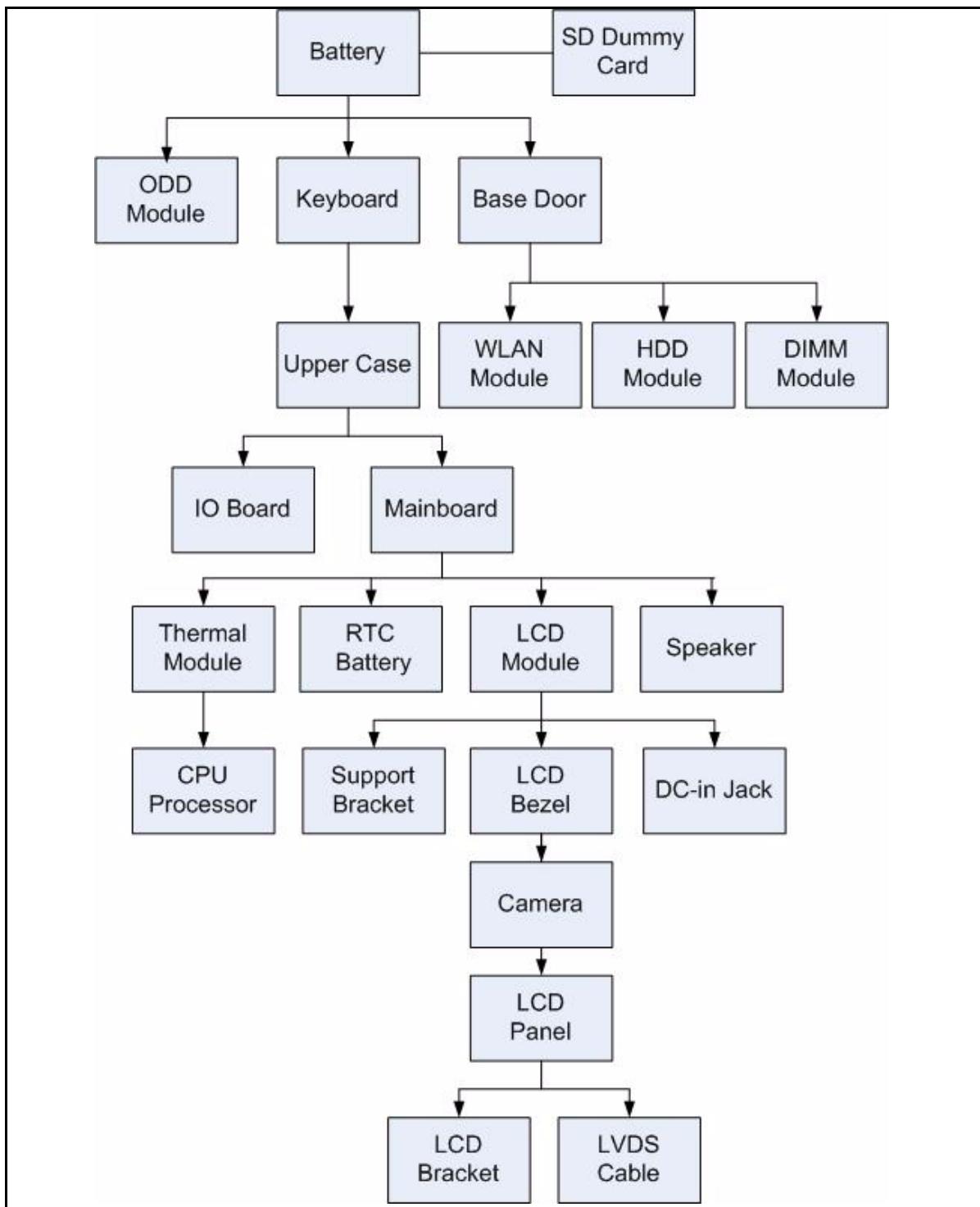


Figure 3-1. Maintenance Flow

Getting Started

Flowchart [Figure 3-1](#) identifies sections for the removal and install sequence. Follow the order of the sequence to avoid damage to any of the hardware components.

Do the following prior to starting any maintenance procedures:

1. Remove power (A) from the system and peripherals ([Figure 3-2](#)).
2. Remove all cables from system.



Figure 3-2. AC Adapter Outlet

3. Place the system on a stable work surface.

Battery Pack Removal

1. Place computer on flat surface, battery side is up.
2. Use the screwdriver to push and hold the battery release latch (A) to unlock position (Figure 3-3). The battery pack will automatically release from the battery bay.

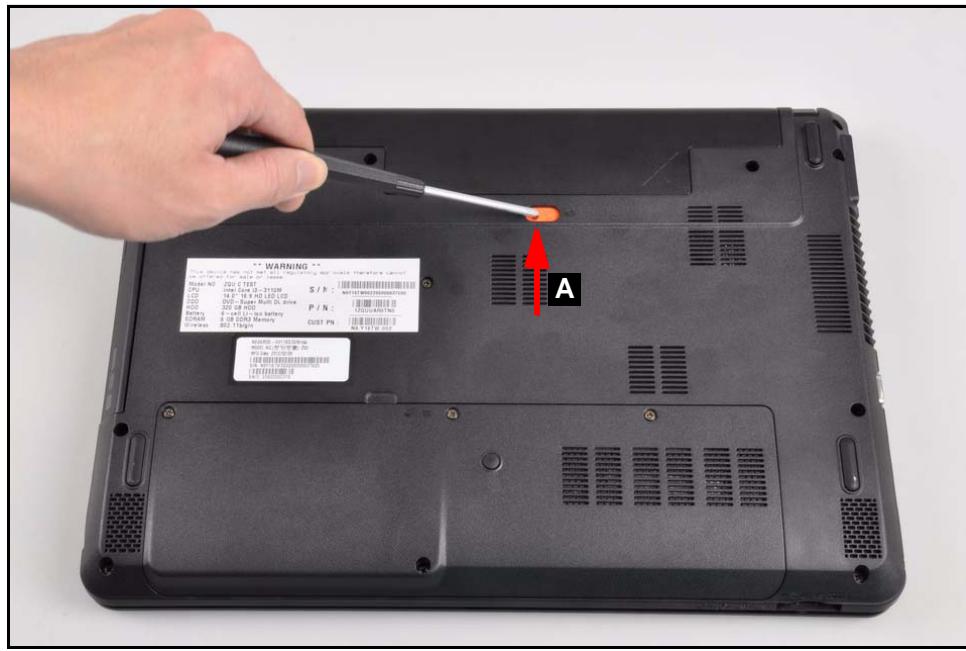


Figure 3-3. Battery Release Latch

3. Lift battery pack (B) from battery bay (Figure 3-4).

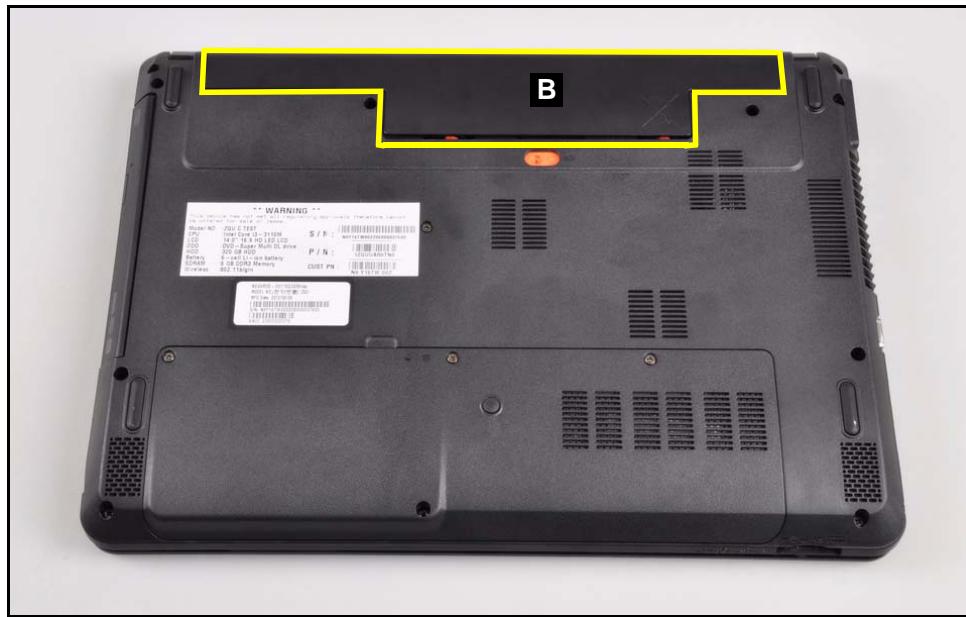


Figure 3-4. Battery

+ **IMPORTANT:**

Follow local regulations for battery (B) disposal ([Figure 3-4](#)).

Battery Pack Installation

1. Slide the battery pack (B) back into the battery bay ([Figure 3-4](#)).
2. The battery release latch (A) will automatically click back to the locked position.

Dummy Card Removal

1. Push dummy card (A) in to release it from the spring latch ([Figure 3-5](#)).
2. Remove dummy card (A) ([Figure 3-5](#)).



Figure 3-5. Dummy Card

Dummy Card Installation

1. Insert dummy card (A) ([Figure 3-5](#)).
2. Push card until spring latch locks.

Keyboard Removal

Prerequisite:

Battery Pack Removal

1. Press downward on the five (5) locking latches until the keyboard disengages and separates from the system (Figure 3-6).



Figure 3-6. Keyboard Latches

2. Turn the keyboard over so that the keyboard (C) is face down on the palm rest (Figure 3-7).
3. Disconnect keyboard FPC (A) from mainboard connector (B) (Figure 3-7).

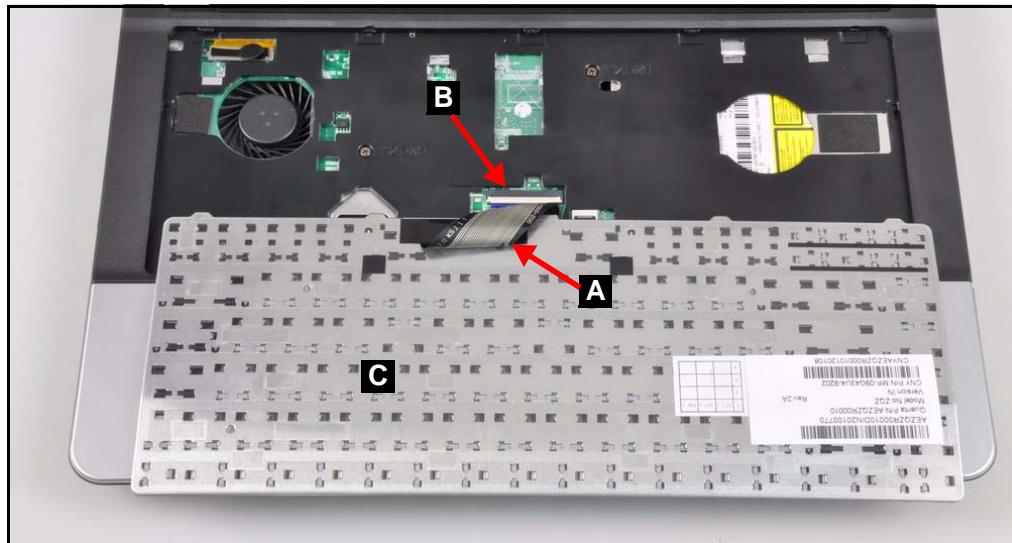


Figure 3-7. Keyboard FPC

4. Remove the keyboard (C) from base assembly (Figure 3-7).

⚠ CAUTION:

Keyboard FPC (Flexible Printed Circuit) can be damaged if removed while mainboard connector is locked.

Keyboard Installation

1. Place the keyboard (C) face down on the palm rest. Refer to [Figure 3-7](#).
2. Connect keyboard FPC (A) to mainboard connector (B). Refer to [Figure 3-7](#).
3. Turn the keyboard over and align the keyboard with the indentation in the upper cover.
4. Press down to secure the latches on the system. Refer to [Figure 3-6](#).
5. Install Battery Pack.

Base Door Removal

Prerequisite:

[Battery Pack Removal](#)

1. Remove four (4) screws securing the base door in place ([Figure 3-8](#)).

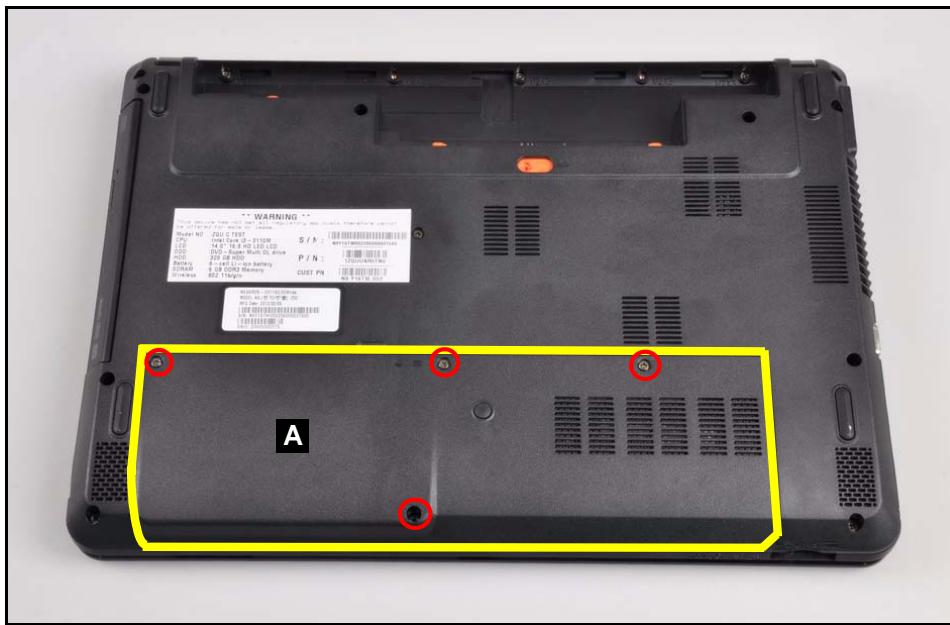


Figure 3-8. Base Door

2. Slide the base door (A) toward the front of the system and lift away from the system ([Figure 3-8](#)).

Base Door Installation

1. Slide the base door (A) downwards and towards the back of the system ([Figure 3-8](#)).
2. Install and secure four (4) screws to the base door. Refer to [Figure 3-8](#).
3. Install Battery Pack.

ID	Size	Quantity	Screw Type
A	M2.5*6	4	

ODD (Optical Disk Drive) Module Removal

Prerequisite:

[Battery Pack Removal](#)

1. Remove one (1) screw (A) securing the ODD module in place ([Figure 3-9](#)).
2. Grasp the ODD bezel (B) to remove ODD module from ODD bay ([Figure 3-9](#)).



Figure 3-9. ODD Module

3. Remove two (2) screws (C) from ODD module ([Figure 3-10](#)).
4. Remove ODD bracket (D) from ODD module ([Figure 3-10](#)).
5. Remove ODD bezel (B) from ODD module ([Figure 3-10](#)).

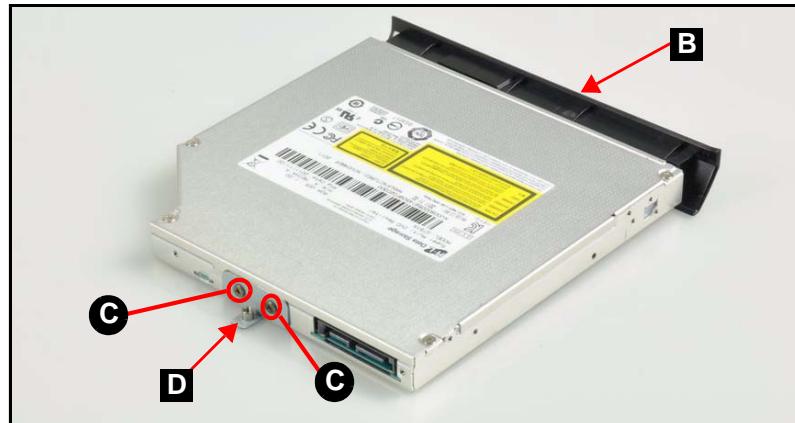


Figure 3-10. ODD Module

ODD Module Installation

1. Install ODD bezel (B) on ODD module ([Figure 3-10](#)).
2. Install ODD bracket (D) on ODD module ([Figure 3-10](#)).
3. Install and secure two (2) screws (C) to secure the bracket (D) to the back of ODD ([Figure 3-10](#)).
4. Install ODD module into ODD bay. Refer to [Figure 3-9](#).
5. Install and secure one (1) screw (A) to the ODD mudule. Refer to [Figure 3-9](#).
6. Install Battery Pack.

ID	Size	Quantity	Screw Type
A	M2.5*6	1	
C	M2.0*3.0	2	

WLAN (Wireless Local Area Network) Module Removal

Prerequisite:

Base Door Removal

1. Find WLAN module (B) on the base assembly. Refer to [Figure 3-11](#).

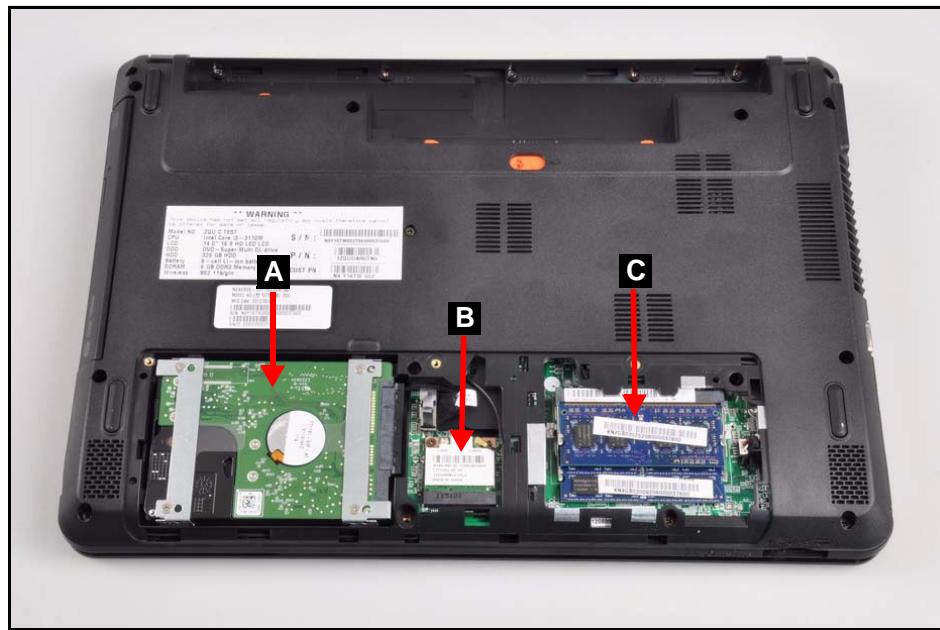


Figure 3-11. Component Location

2. Disconnect WLAN antenna (C) connected to WLAN card ([Figure 3-12](#)).
3. Remove one (1) screw (A) securing the WLAN module in place ([Figure 3-12](#)).

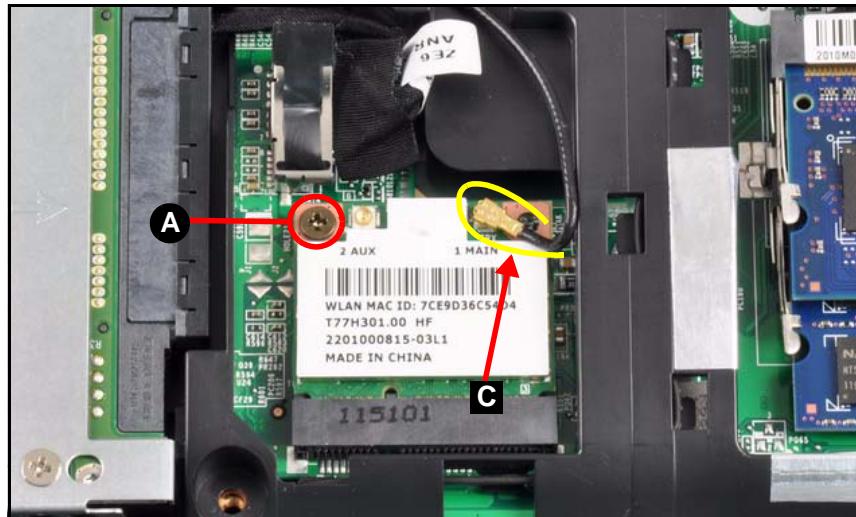


Figure 3-12. WLAN Module

4. Remove WLAN module from mainboard connector (D) ([Figure 3-13](#)).



Figure 3-13. WLAN Module

WLAN Module Installation

1. Place WLAN module into mainboard connector (D). Refer to [Figure 3-13](#).
2. Install and secure one (1) screw (A) to the WLAN module ([Figure 3-12](#)).
3. Connect the antenna (C) to the WLAN card ([Figure 3-12](#)).
4. Install Base Door.

ID	Size	Quantity	Screw Type
A	M2.0*3.0	1	

DIMM (Dual In-line Memory Module) Module Removal

Prerequisite:

Base Door Removal

1. Find DIMM (C) on the base assembly ([Figure 3-11](#)).
2. Push DIMM clips (A) outwards ([Figure 3-14](#)).
3. Remove DIMM from mainboard connector (B) ([Figure 3-14](#)).

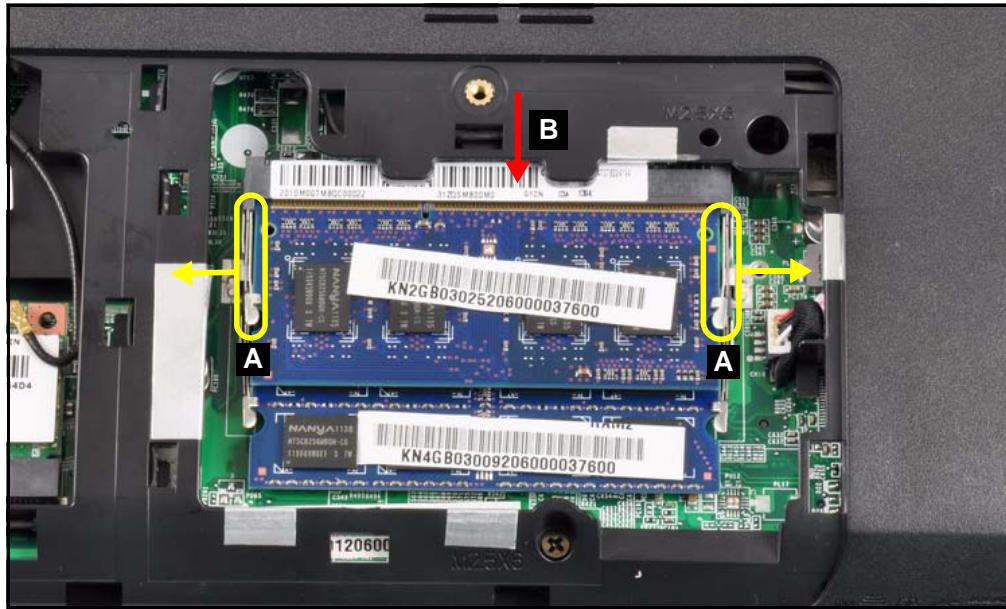


Figure 3-14. DIMM Modules

4. Repeat steps 2 and 3 for remaining modules.

DIMM Module Installation

1. Insert DIMM into mainboard connector (B). Refer to [Figure 3-14](#).
2. Push down on DIMM until module clips (A) lock in position. Refer to [Figure 3-14](#).
3. Repeat steps 2 and 3 for remaining modules.
4. Install Base Door.

HDD (Hard Disk Drive) Module Removal

Prerequisite:

Base Door Removal

1. Find HDD module (A) on the base assembly as shown in [Figure 3-11](#).
2. Disconnect HDD cable from the mainboard connector (D) ([Figure 3-15](#)).
3. Pull the tab (B) to release HDD module from mainboard connector (C). Refer to [Figure 3-15](#).

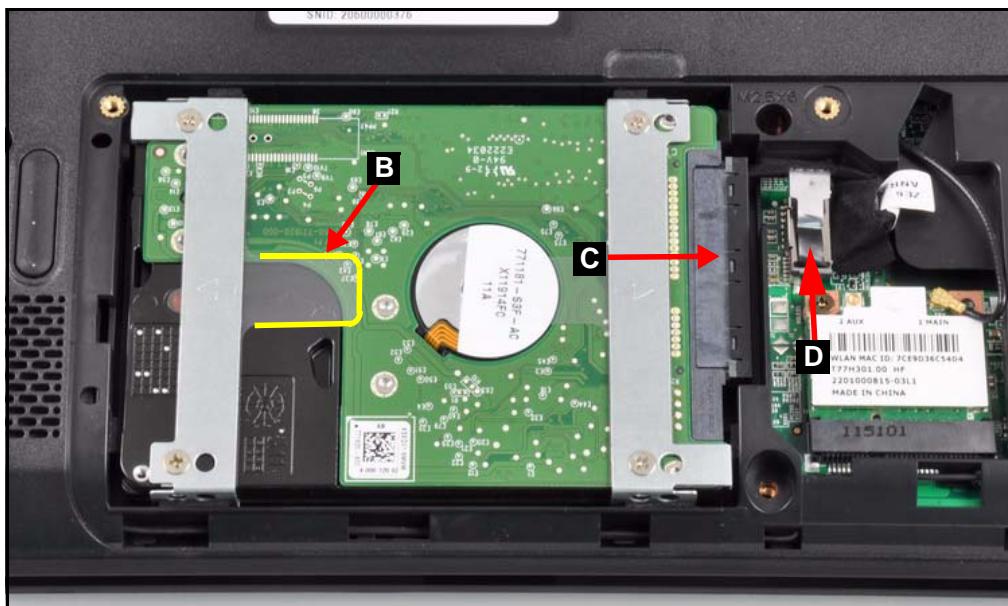


Figure 3-15. HDD Module

4. Remove HDD cable from HDD connector (E) ([Figure 3-16](#)).
5. Remove four (4) screws (F) from HDD bracket (G) ([Figure 3-16](#)).

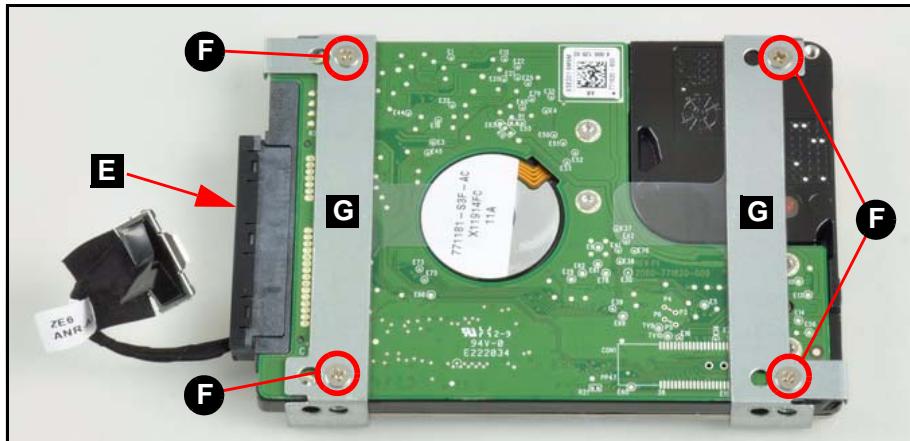


Figure 3-16. HDD Module

6. Remove HDD bracket (G) from HDD (Figure 3-17).



Figure 3-17. HDD Bracket

HDD Module Installation

1. Place HDD brackets (G) onto HDD (Figure 3-17).
2. Install and secure four (4) screws (F) to HDD brackets (G) (Figure 3-16).
3. Attach HDD cable to HDD connector (E). Refer to Figure 3-16.
4. Place HDD module onto the base assembly and connect HDD module to mainboard connector (C). Refer to Figure 3-15.
5. Connect HDD cable to mainboard connector (D) (Figure 3-15).
6. Install Base Door.

ID	Size	Quantity	Screw Type
F	M3.0*3.5 Ni	4	

Upper Case Removal

Prerequisite:

Keyboard Removal and Base Door Removal

1. Remove eighteen (18) screws from the base assembly (Figure 3-18).

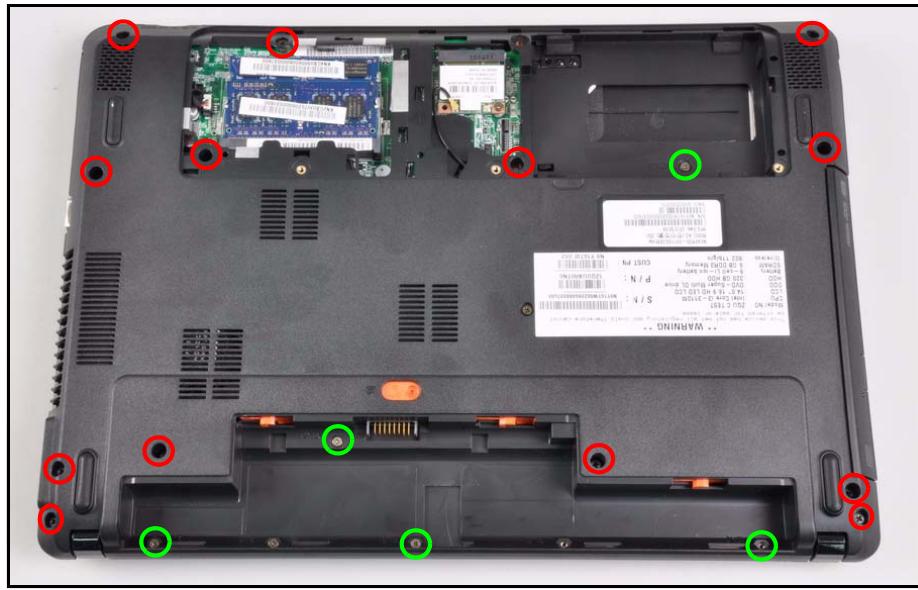


Figure 3-18. Upper Case Screws Location

2. Disconnect touchpad FPC (A) from mainboard connector (B) (Figure 3-19).
3. Remove two (2) screws (C) securing the upper case in place (Figure 3-19).

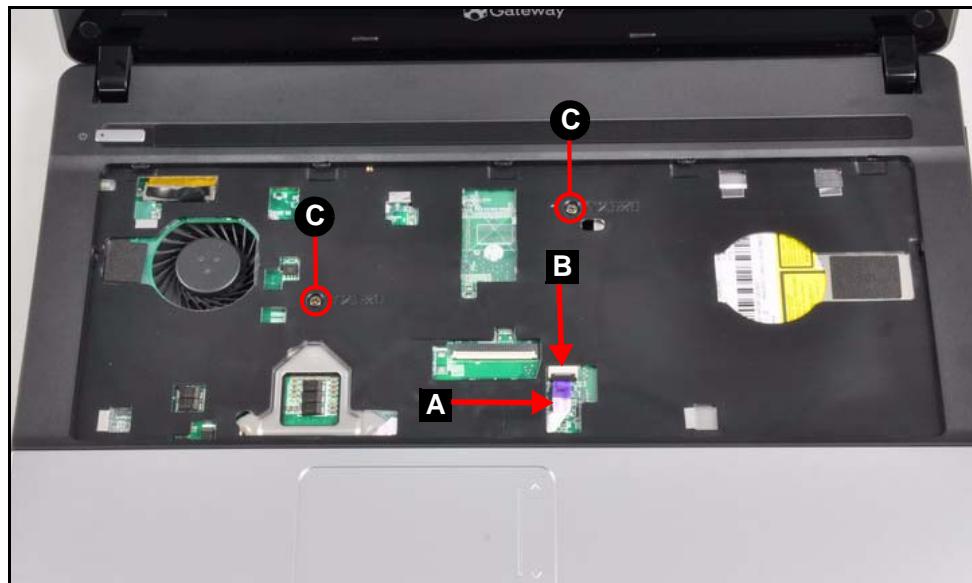


Figure 3-19. Touchpad FPC

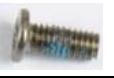
4. Lift up the upper case by starting from the top edge of the upper case. Refer to [Figure 3-20](#).
5. Release the tabs on the bottom edge of the upper case.
6. Grasp and remove the upper case from the system.



Figure 3-20. Upper Case Removal

Upper Case Installation

1. Place the upper case on the base assembly and align it properly to the edge of the system. Refer to [Figure 3-20](#).
2. Install and secure two (2) screws (C) to the upper case ([Figure 3-19](#)).
3. Connect touchpad FPC (A) to mainboard connector (B). Refer to [Figure 3-19](#).
4. Install and secure eighteen (18) screws to the base assembly. Refer to [Figure 3-18](#).
5. Install Keyboard and Base Door.

ID	Size	Quantity	Screw Type
Red Call out	M2.5*6	13	
Green Call out	M2*3	5	
C	M2.5*6	2	

IO Board Removal

Prerequisite:

Upper Case Removal

1. Find IO Board (B) on the base assembly. Refer to [Figure 3-21](#).



Figure 3-21. Component Location

2. Disconnect IO board FPC (A) from IO board connector (D) ([Figure 3-22](#)).
3. Remove one (1) screw (C) securing the IO board in place ([Figure 3-22](#)).
4. Remove IO board (B) from the base assembly.

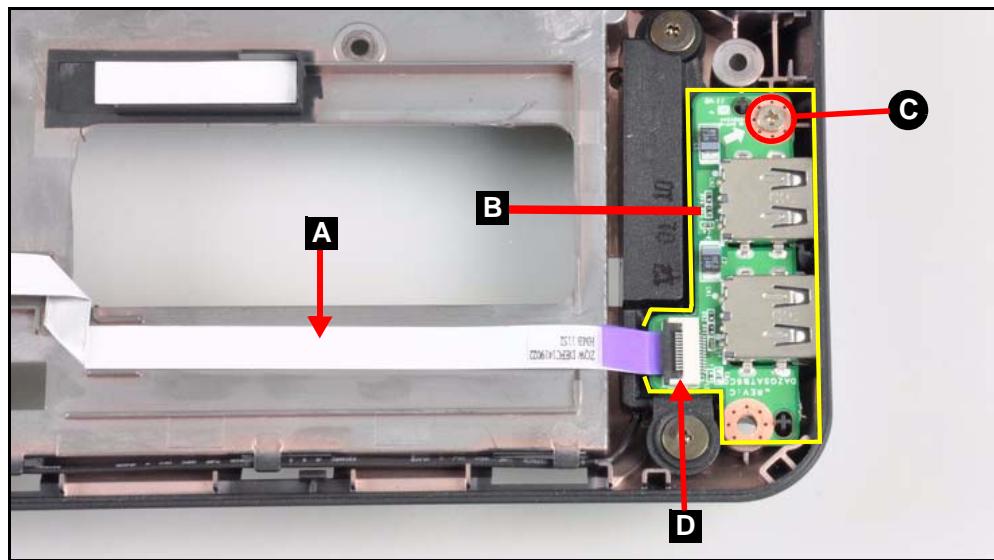


Figure 3-22. IO Board

IO Board Installation

1. Place IO Board (B) on the base assembly. Refer to [Figure 3-22](#).
2. Install and secure one (1) screw (C) to the IO board ([Figure 3-22](#)).
3. Connect IO board FPC (A) to IO board connector (D) ([Figure 3-22](#)).
4. Install Upper Case.

ID	Size	Quantity	Screw Type
C	M2.5*4	1	

Mainboard Removal

Prerequisite:

Upper Case Removal

1. Find Mainboard (A) on the base assembly as shown in [Figure 3-21](#).
2. Disconnect the speaker cable from mainboard connector (B) ([Figure 3-23](#)).

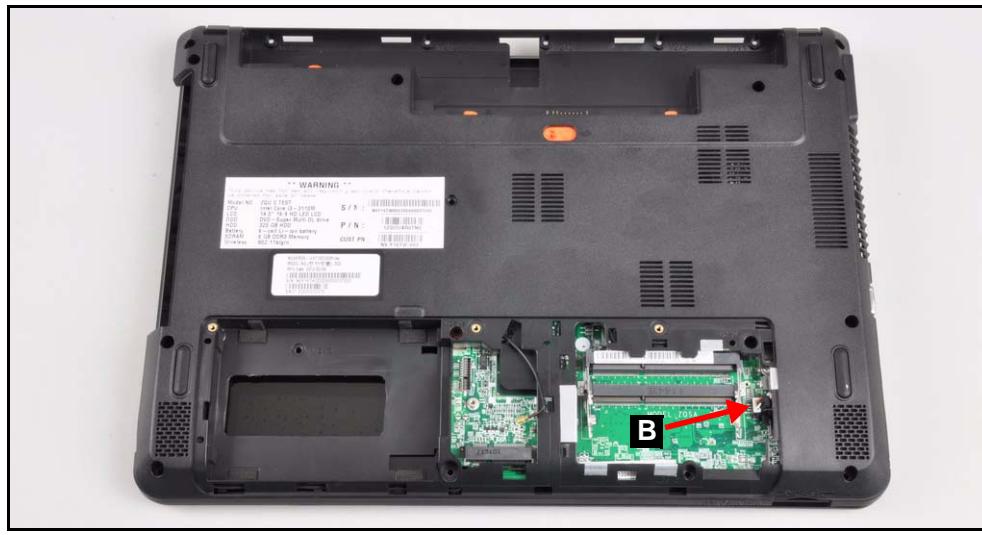


Figure 3-23. Mainboard Backside

3. Disconnect LVDS cable from mainboard connector (D) ([Figure 3-24](#)).
4. Disconnect DC-in cable from mainboard connector (E) ([Figure 3-24](#)).
5. Disconnect IO board FPC from mainboard connector (F) ([Figure 3-24](#)).
6. Remove two (2) screws (C) securing the mainboard in place ([Figure 3-24](#)).

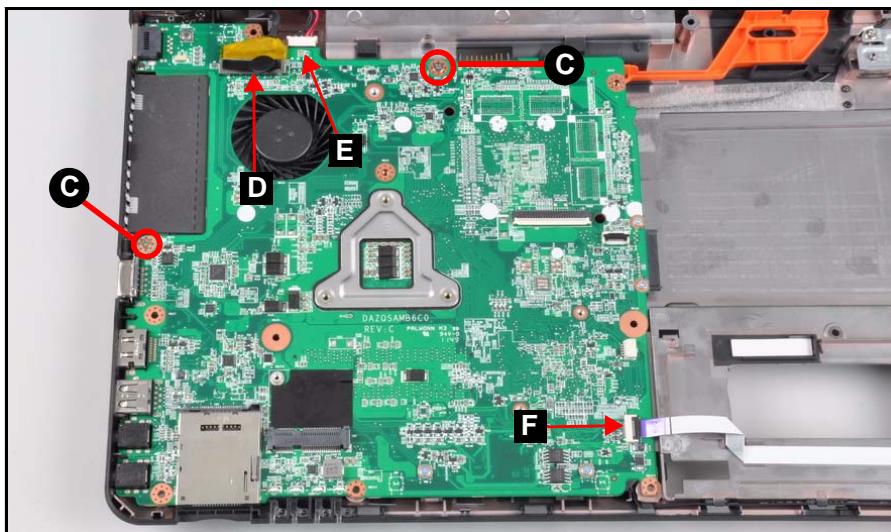


Figure 3-24. Mainboard Frontside

7. Remove the Mainboard by gently lifting it from the base assembly (Figure 3-25).

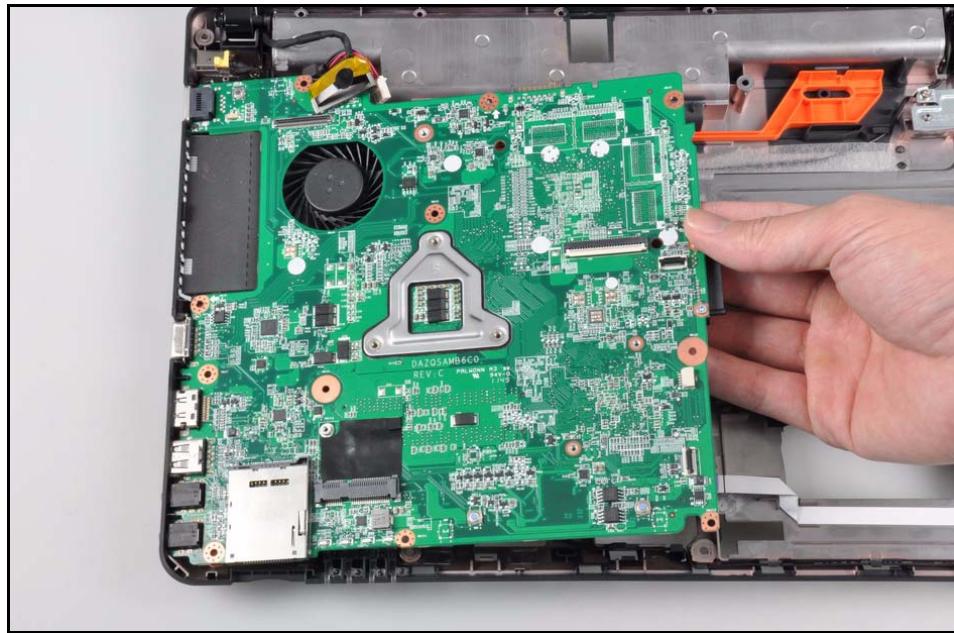


Figure 3-25. Mainboard Removal

⚠ CAUTION:

Make sure all cables are moved away from the device to avoid damage during removal.



Figure 3-26. Mainboard

+ IMPORTANT:

Circuit boards $>10\text{ cm}^2$ have been highlighted with a yellow rectangle as shown in Figure 3-26. Remove the circuit board and follow local regulations for disposal.

Mainboard Installation

1. Place the mainboard onto the base assembly. Refer to [Figure 3-25](#).
2. Install and secure two (2) screws (C) to mainboard. Refer to [Figure 3-24](#).
3. Connect IO Board FPC to mainboard connector (F) ([Figure 3-24](#)).
4. Connect DC-in cable to mainboard connector (E) ([Figure 3-24](#)).
5. Connect LVDS cable to mainboard connector (D) ([Figure 3-24](#)).
6. Connect the speaker cable to mainboard connector (B) on the backside of the mainboard ([Figure 3-23](#)).
7. Install Upper Case.

ID	Size	Quantity	Screw Type
C	M2.5*4	2	

Speaker Module Removal

Prerequisite:

Mainboard Removal

1. Find Speaker Module (A) on the base assembly as shown on [Figure 3-27](#).
2. Remove four (4) screws (B) securing the speaker module in place ([Figure 3-27](#)).

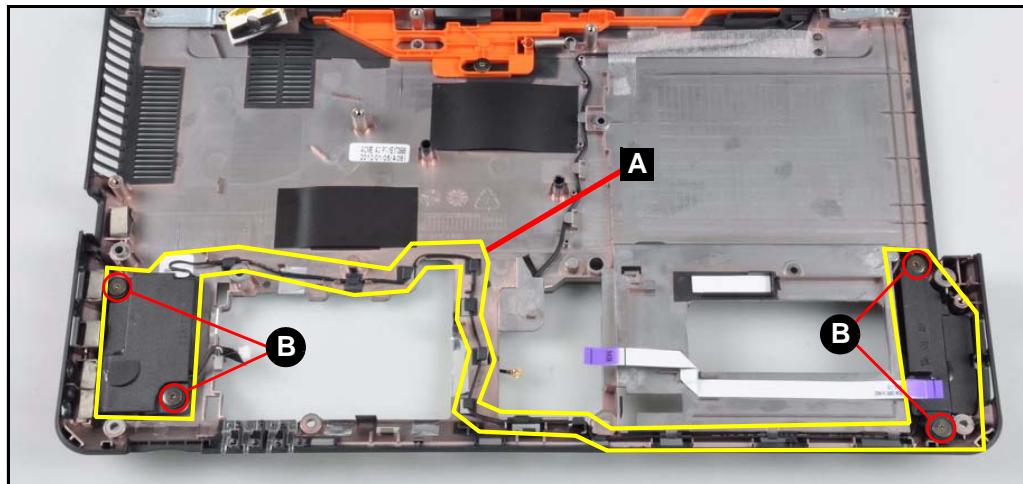


Figure 3-27. Speaker Module

3. Lift up the Right Speaker upwards from the base assembly as shown in [Figure 3-28](#).
4. Gently remove the speaker cable (B) from the cable guides ([Figure 3-28](#)).

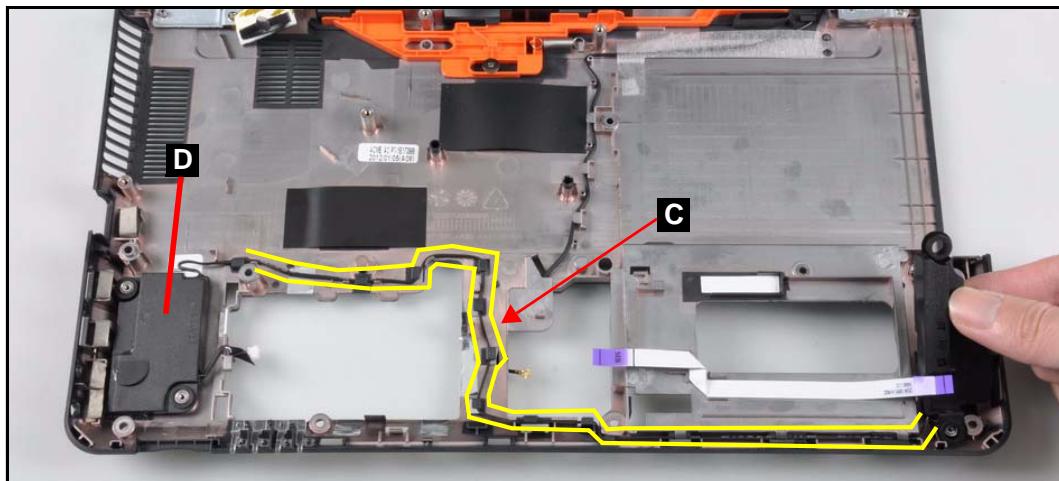


Figure 3-28. Speaker Cable

5. Remove Speaker Module (A) from the base assembly.

Speaker Module Installation

1. Place the Left Speaker (D) onto base assembly. Refer to [Figure 3-28](#).
2. Install and secure two (2) screws (B) to the left speaker. Refer to [Figure 3-27](#).
3. Secure the speaker cable to the cable guides from left to right ([Figure 3-28](#)).
4. Place the Right Speaker onto base assembly. Refer to [Figure 3-28](#).
5. Install and secure two (2) screws (B) to the right speaker ([Figure 3-27](#)).
6. Install Mainboard.

ID	Size	Quantity	Screw Type
B	M2*2	4	

RTC battery Removal

Prerequisite:

Mainboard Removal

1. Find the RTC battery (A) on the mainboard. Refer to [Figure 3-29](#).
2. Disconnect the RTC battery cable from mainboard connector (B) ([Figure 3-29](#)).

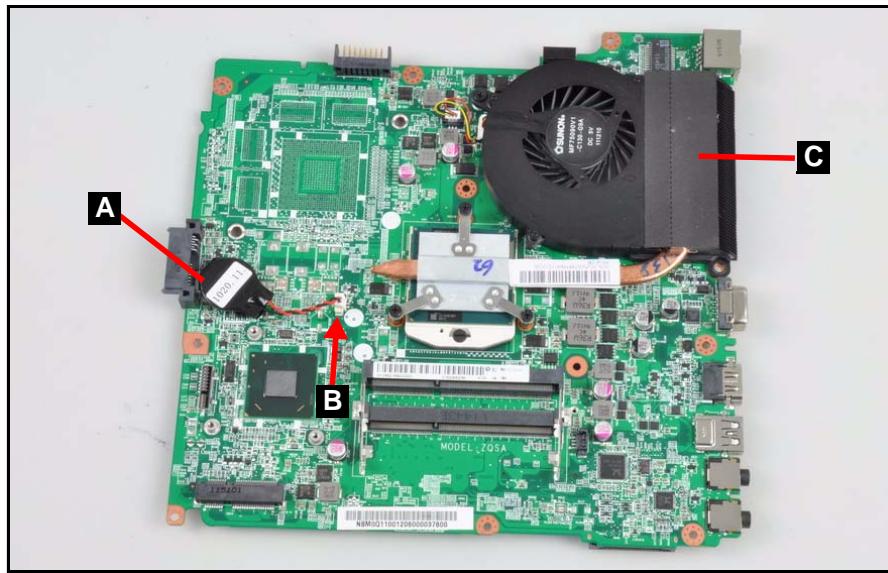


Figure 3-29. RTC battery & Thermal Module Location

3. Pry up the the RTC battery from the adhesive and remove it ([Figure 3-30](#)).

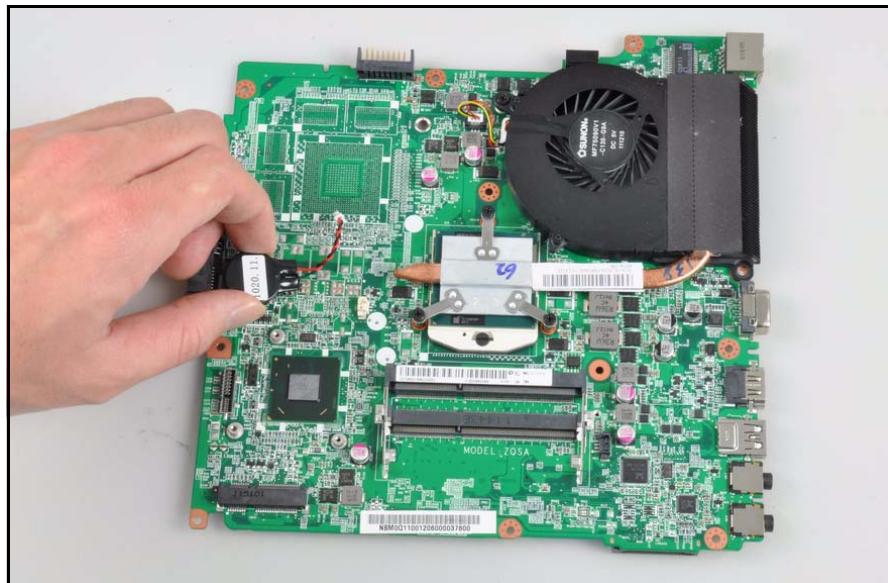


Figure 3-30. RTC battery

+ **IMPORTANT:**

Follow local regulations for battery ([Figure 3-30](#)) disposal.

RTC battery Installation

1. Place the RTC battery (A) onto the mainboard and secure it in place with adhesives. Refer to [Figure 3-30](#).
2. Connect the RTC battery cable to mainboard connector (B) ([Figure 3-29](#)).
3. Install Mainboard.

Thermal Module Removal

Prerequisite:

Mainboard Removal

1. Find the thermal module (C) on the mainboard. Refer to [Figure 3-29](#).
2. Disconnect the thermal fan cable from mainboard connector (B) ([Figure 3-31](#)).
3. Loosen four (4) captive screws (A) in numerical order from one (1) to four (4). Refer to [Figure 3-31](#).
4. Remove thermal module from the mainboard.

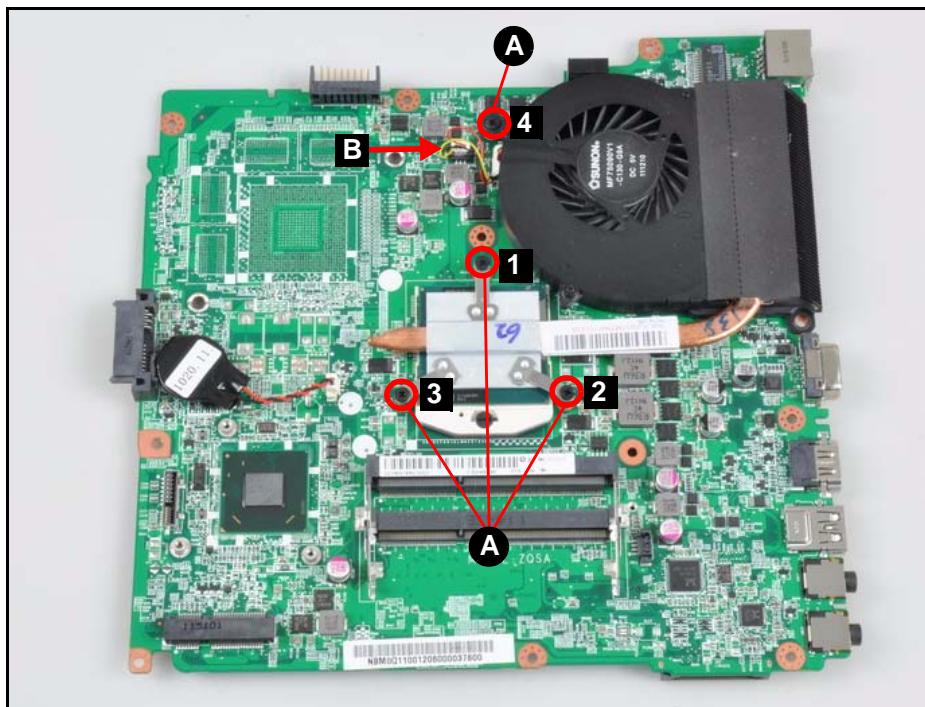


Figure 3-31. Thermal Module

Thermal Module Installation

+ **IMPORTANT:**

Apply approved thermal grease and ensure all heat pads are in position before replacing module.

⚠ CAUTION:

Use caution when applying thermal grease. Thermal grease may cause damage to the mainboard.

The following thermal grease types are approved for use:

- Silmore GP50
- Honeywell
- Jet Motor 7762

The following thermal pads are approved for use:

- Eapus XR-PE

1. Remove all traces of thermal grease from CPU using a lint-free cloth or cotton swab and Isopropyl Alcohol, Acetone, or other approved cleaning agent.
2. Apply small amount of thermal grease to center of CPU.

⇒ NOTE:

Force used during installation of thermal module is sufficient to spread grease evenly over CPU top.

3. Place the thermal module (C) on the mainboard. Refer to [Figure 3-29](#).
4. Tighten four (4) captive screws (A) in numerical order from one (1) to four (4) to mainboard ([Figure 3-31](#)). Ensure the thermal module is properly aligned and seated.
5. Connect the thermal fan cable to mainboard connector (B) ([Figure 3-31](#)).
6. Install Mainboard.

CPU Processor Removal

Prerequisite:

[Thermal Module Removal](#)

1. Find CPU processor (B) on the mainboard. Refer to [Figure 3-33](#).
2. Rotate the cam lock (A) to the unlock position ([Figure 3-32](#)).

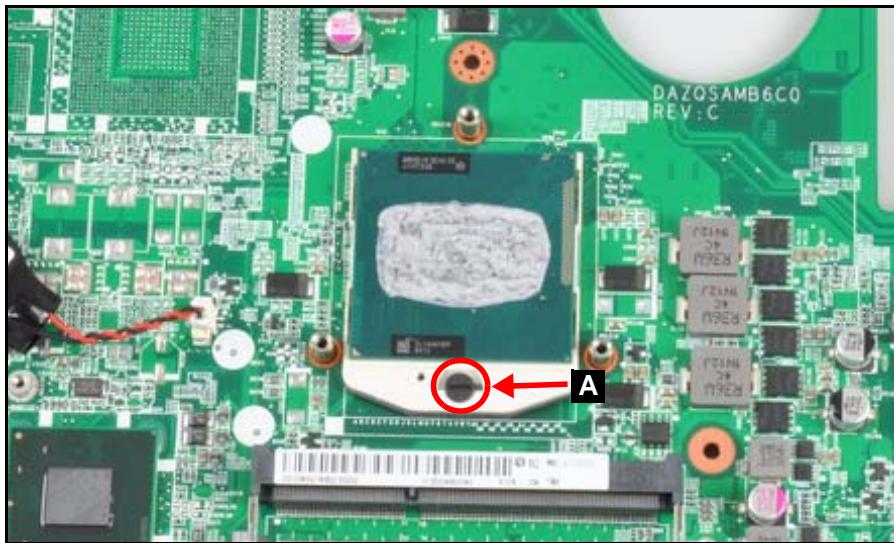


Figure 3-32. CPU Processor

3. Remove CPU processor (B) from Mainboard ([Figure 3-33](#)).

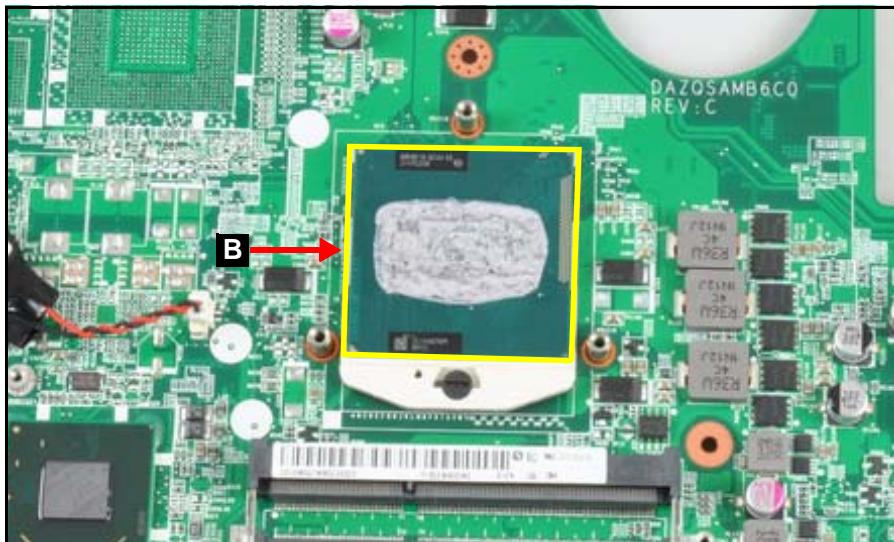


Figure 3-33. CPU Processor

CPU Processor Installation

1. Place CPU processor (B) on the mainboard. Refer to [Figure 3-33](#).
2. Tighten the cam lock (A) to the locked position ([Figure 3-32](#)).
3. Install Thermal Module.

LCD (Liquid Crystal Display) Module Removal

Prerequisite:

Mainboard Removal

1. Peel the left end of the tape (C) securing the antenna on the base assembly and remove the antenna from the cable guides (Figure 3-34).
2. Remove three (3) screws (A) from LCD hinges (Figure 3-34).

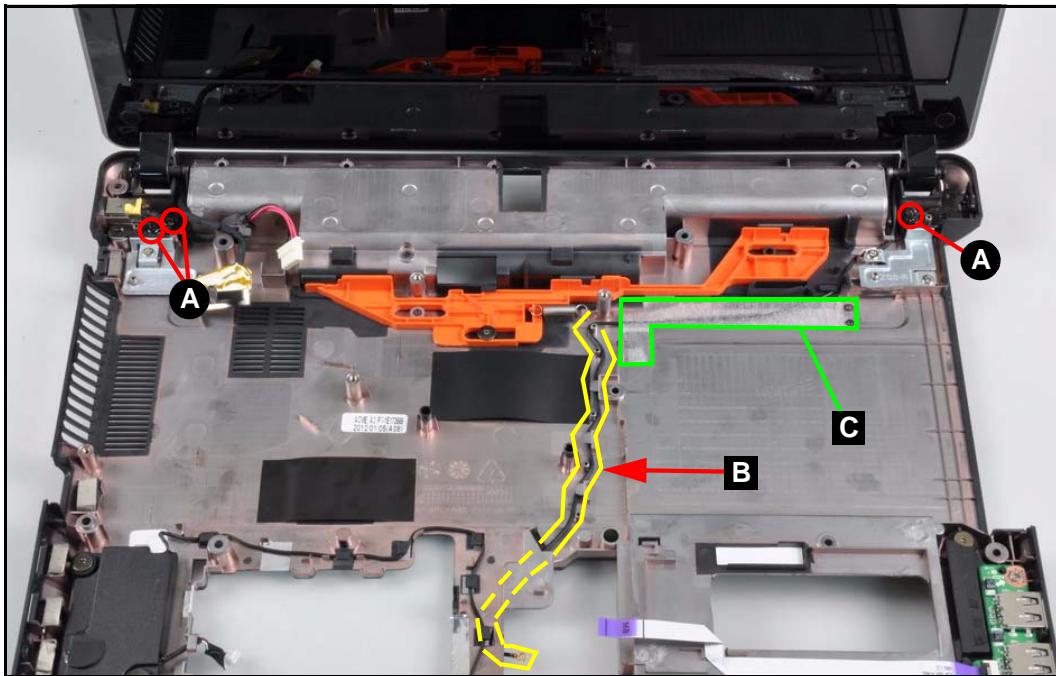


Figure 3-34. LCD Module

3. Remove the LCD module from the base assembly (Figure 3-35).



Figure 3-35. LCD Module Removal

⚠ CAUTION:

Make sure all cables and antennas are moved away from the device to avoid damage during removal.

LCD Module Installation

1. Place the LCD Module on the base assembly. The LVDS cable and the antenna must be placed above the LCD hinges. Refer to [Figure 3-35](#).
2. Align LCD hinges with the hinge guides on the Base Assembly. Refer to [Figure 3-35](#).
3. Install and secure three (3) screws (A) to LCD hinges. Refer to [Figure 3-34](#).
4. Place the antenna (B) to the cable guides and secure it with the tape (C). Refer to [Figure 3-34](#).
5. Install Mainboard.

ID	Size	Quantity	Screw Type
A	M2.5*6	3	

DC-in Jack Removal

Prerequisite:

[LCD \(Liquid Crystal Display\) Module Removal](#)

1. Find DC-in Jack Module (A) on the base assembly. Refer to [Figure 3-36](#).
2. Remove DC-in Jack Module (A) from the base assembly.

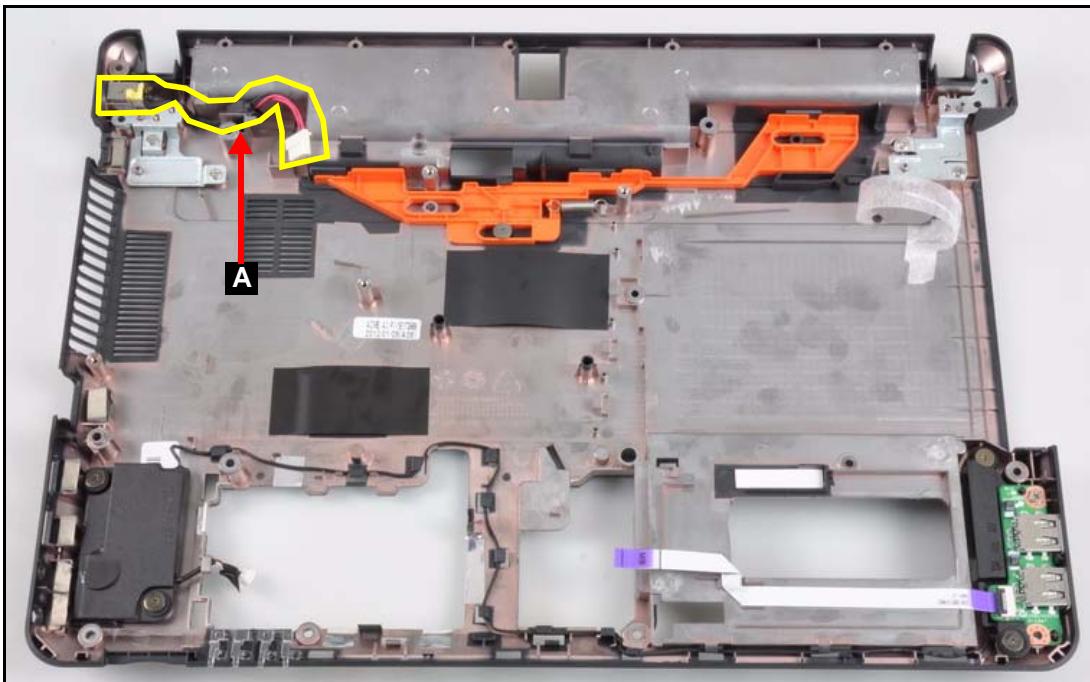


Figure 3-36. DC-in Jack Module

DC-in Jack Installation

1. Place DC-in Jack Module (A) on the base assembly. Refer to [Figure 3-36](#).
2. Secure DC-in cable to the cable guide on the base assembly ([Figure 3-36](#)).
3. Install LCD Module.

Support Bracket Removal

Prerequisite:

[LCD \(Liquid Crystal Display\) Module Removal](#)

1. Find Support Brackets (B) on the base assembly. Refer to [Figure 3-37](#).
2. Remove four (4) screws securing the support brackets in place ([Figure 3-37](#)).
3. Remove the support brackets from the base assembly.

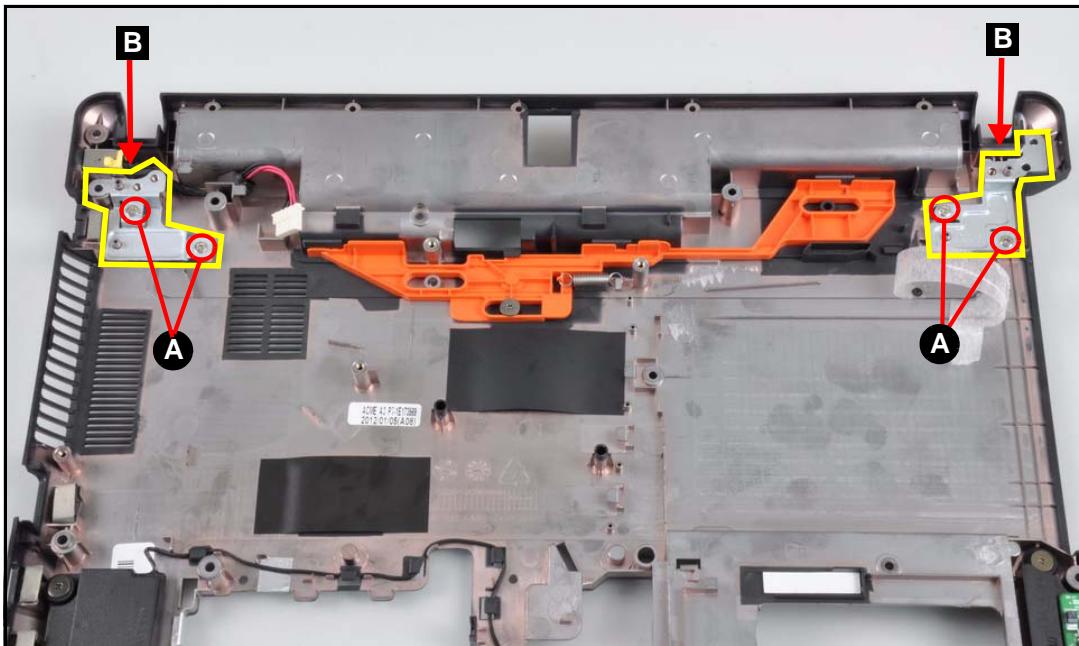


Figure 3-37. Support Brackets

Support Bracket Installation

1. Place the support brackets (B) on the base assembly. Refer to [Figure 3-37](#)
2. Install and secure four (4) screws to the support brackets ([Figure 3-37](#)).
3. Install LCD Module.

ID	Size	Quantity	Screw Type
A	M2.5*4	4	

LCD Bezel Removal

Prerequisite:

[LCD \(Liquid Crystal Display\) Module Removal](#)

1. Remove two (2) screw mylar (A) from the LCD bezel ([Figure 3-38](#)).



Figure 3-38. LCD Bezel Screw Mylar

2. Remove two (2) screws (B) securing the LCD bezel in place ([Figure 3-39](#)).



Figure 3-39. LCD Bezel Screw

3. Lift the top of the bezel up by releasing it from the latches (Figure 3-40).



Figure 3-40. LCD Bezel

4. Continue along the sides of the bezel until all the latches have been released (Figure 3-41).



Figure 3-41. LCD Bezel

5. Lift the bezel from LCD module.

LCD Bezel Installation

1. Place LCD bezel on the LCD module. Refer to [Figure 3-40](#) and [Figure 3-41](#).
2. Press along the edges of the LCD bezel to secure the latches on the LCD module. Refer to [Figure 3-40](#) and [Figure 3-41](#).
3. Install and secure two (2) screws (B) to the LCD bezel. Refer to [Figure 3-39](#).
4. Attach and secure two (2) screw mylar (A) to the LCD bezel. Refer to [Figure 3-38](#).
5. Install LCD module.

ID	Size	Quantity	Screw Type
B	M2.5*4	2	

Camera Module Removal

Prerequisite:

[LCD Bezel Removal](#)

1. Find the camera module (A) in the LCD module ([Figure 3-42](#)).

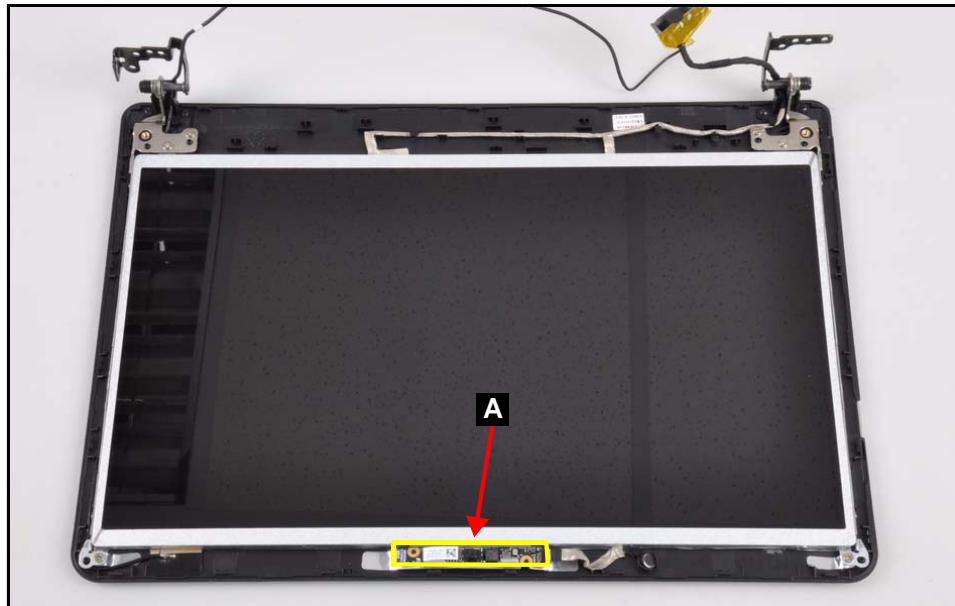


Figure 3-42. Camera Module Location

2. Disconnect the camera cable (B) from connector (C) ([Figure 3-43](#)).

⇒ NOTE:

Use care not to damage the cable.



Figure 3-43. Camera Cable

3. Lift the camera module (A) from the adhesive and remove it.

Camera Module Installation

1. Place the camera module (A) on the LCD cover and secure it in place with adhesives. Refer to [Figure 3-42](#).
2. Connect the camera cable (B) to connector (C). Refer to [Figure 3-43](#).
3. Install LCD Bezel.

LCD Panel Removal

Prerequisite:

[Camera Module Removal](#)

1. Remove the microphone (B) from its compartment on the LCD cover (Figure 3-44).
2. Remove the six (6) screws (A) from the LCD panel (Figure 3-44).

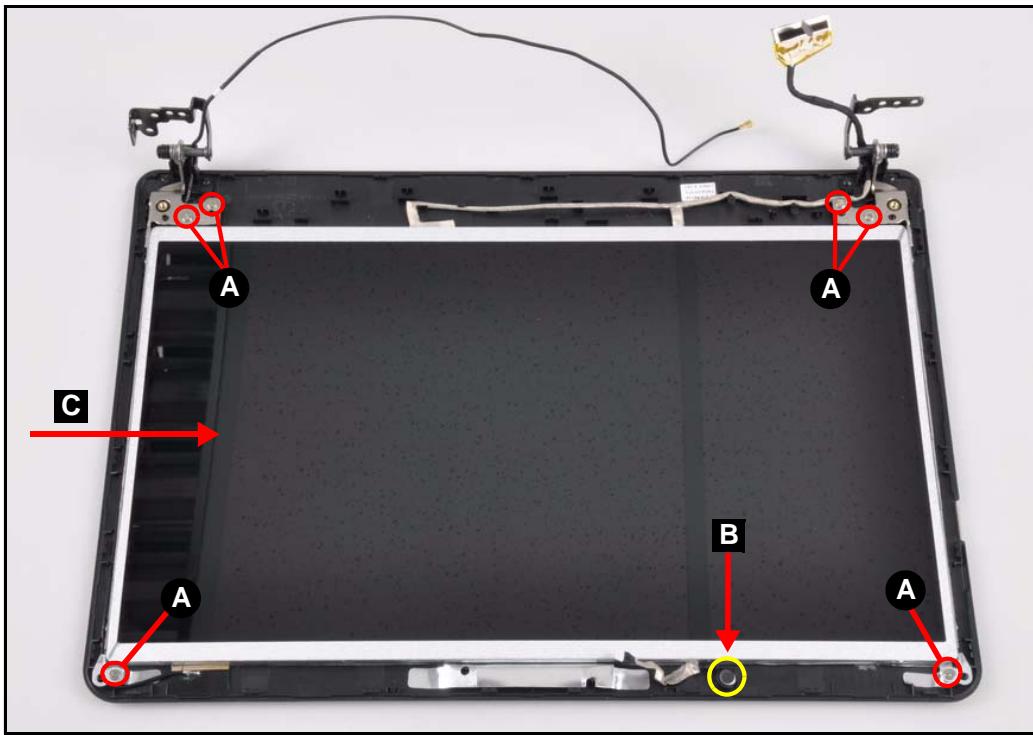


Figure 3-44. LCD Panel

3. Lift the LCD panel (C) from LCD cover (Figure 3-44).

⚠ CAUTION:

Make sure all cables are moved away from the device to avoid damage during LCD Panel removal.

LCD Panel Installation

1. Place LCD panel (C) on the LCD cover. Refer to [Figure 3-44](#).
2. Install and secure six (6) screws (A) to the LCD panel on the LCD cover. Refer to [Figure 3-44](#).
3. Place the microphone (B) back to its compartment on the LCD cover ([Figure 3-44](#)).
4. Install Camera Module.

ID	Size	Quantity	Screw Type
A	M2.5*4	6	

LCD Bracket Removal

Prerequisite:

[LCD Panel Removal](#)

1. Remove the four (4) screws (A) ([Figure 3-45](#)).



Figure 3-45. LCD Bracket

2. Remove LCD bracket from the LCD panel.

LCD Bracket Installation

1. Place LCD bracket on the LCD panel ([Figure 3-45](#)).
2. Install and secure four (4) screws (A) to the LCD bracket ([Figure 3-45](#)).
3. Install LCD panel.

ID	Size	Quantity	Screw Type
A	M2*3	4	

LVDS and Camera Cable Removal

Prerequisite:

[LCD Panel Removal](#)

1. Remove LVDS and camera cable (A) from the adhesive on the rear of the LCD panel ([Figure 3-46](#)).

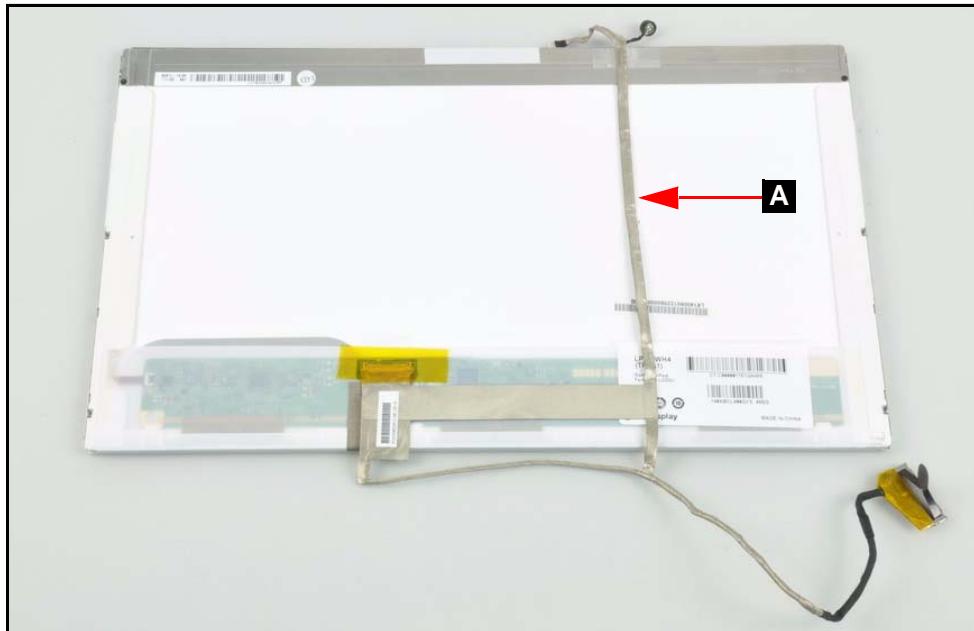


Figure 3-46. LVDS and Camera Cable

2. Remove the clear mylar tape (B) securing the camera cable to the LCD panel ([Figure 3-47](#)).

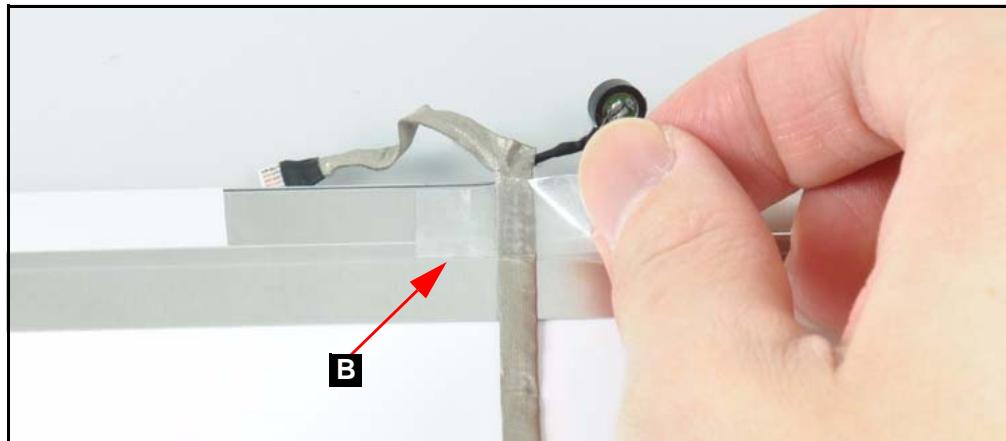


Figure 3-47. Camera Cable

3. Remove the yellow tape (C) securing the LVDS cable to the LCD panel connector (Figure 3-48).

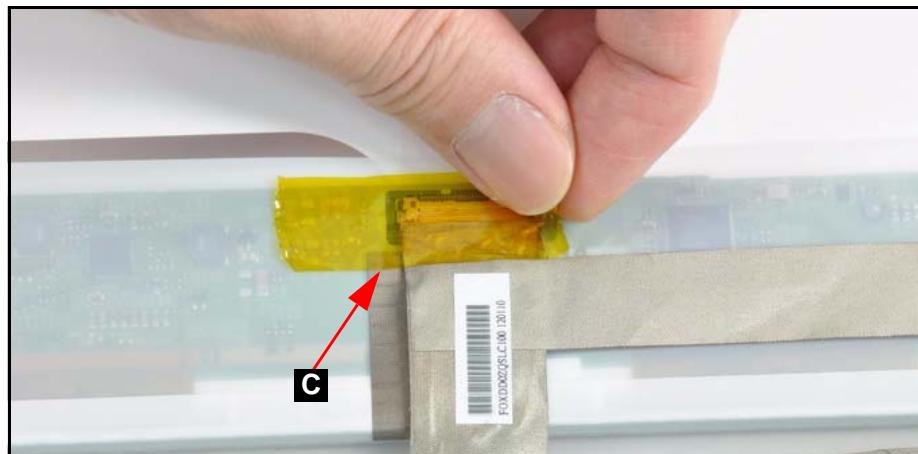


Figure 3-48. LVDS Cable

4. Starting from the top, remove the clear mylar tape (D) and disconnect the LVDS cable from LCD panel connector (E) (Figure 3-49).

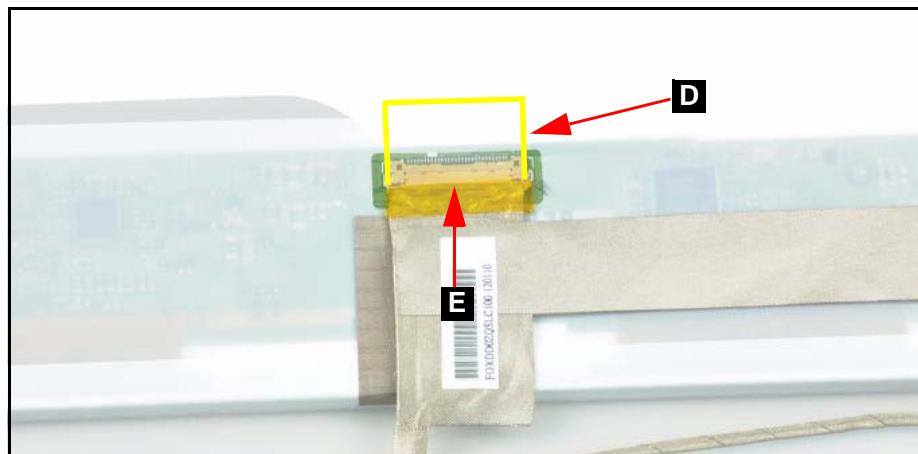


Figure 3-49. LVDS Cable

5. Remove the LVDS and camera cable from the LCD panel.

LVDS and Camera Cable Installation

1. Place LVDS and camera cable on the rear of the LCD panel. Refer to [Figure 3-46](#).
2. Place the LVDS cable into the LCD panel connector (E) and secure the clear mylar tape (D). Refer to [Figure 3-49](#).
3. Adhere the yellow tape (C) to secure the LVDS cable in place. Refer to [Figure 3-48](#).
4. Adhere the clear mylar tape (B) to secure the camear cable in place. Refer to [Figure 3-47](#).
5. Replace the adhesives to secure the LVDS and camera cable on the rear of the LCD panel in place ([Figure 3-46](#)).
6. Install LCD panel.

CHAPTER 4

Troubleshooting



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Troubleshooting

Introduction

This chapter contains information about troubleshooting common problems associated with the notebook.

General Information

The following procedures are a guide for troubleshooting computer problems. The step by step procedures are designed to be performed as described.

⇒ NOTE:

The diagnostic tests are intended for Acer products only. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain as much detailed information as possible about the problem.
2. If possible, verify the symptoms by re-creating the failure through diagnostic tests or repeating the operation that led to the problem.
3. Use Table 4-1 with the verified symptom to determine the solution.

Table 4-1. Common Problems

Symptoms (Verified)
Power On Issues
No Display Issues
LCD Picture Failure
Internal Keyboard Failure
Touchpad Failure
Internal Speaker Failure
Internal Microphone Failure
USB Failure
Other Functions Failure
Intermittent Problems
Undetermined Problems

4. If the issue is still not resolved, refer to [Online Support Information](#).

⇒ NOTE:

Do not replace non-defective FRU parts.

Power On Issues

If the system does not power on, perform the following:

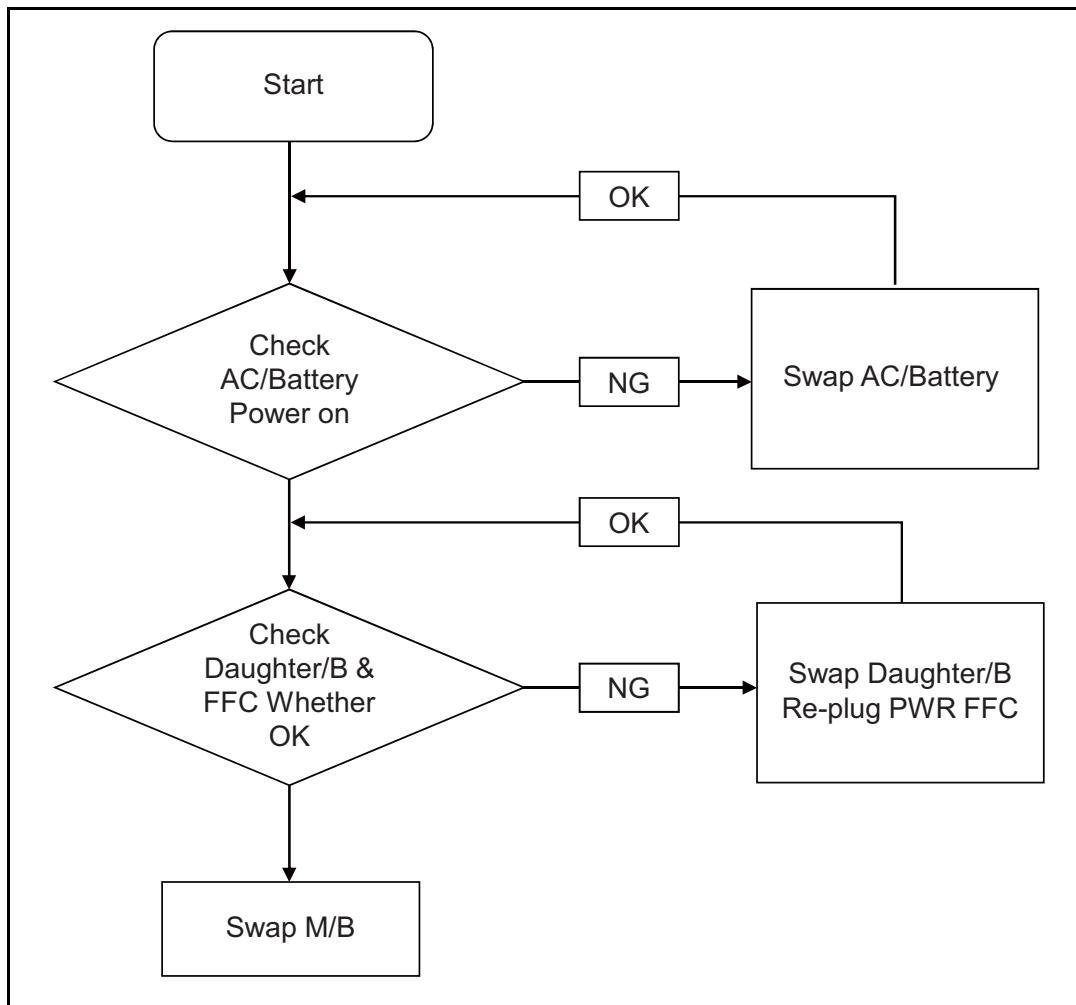


Figure 4-1. Power On Issue

Computer Shuts Down Intermittently

If the system powers off at intervals, perform the following.

1. Makes sure the power cable is properly connected to the computer and the electrical outlet.
2. Remove all extension cables between the computer and the outlet.
3. Remove all surge protectors between the computer and the electrical outlet. Plug the computer directly into a known serviceable electrical outlet.
4. Disconnect the power and open the casing to check the thermal unit and fan airways are free of obstructions.
5. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.

6. Remove any recently installed software.
7. If the issue is still not resolved, refer to *Online Support Information*.

No Display Issues

If the Display does not work, perform the following:

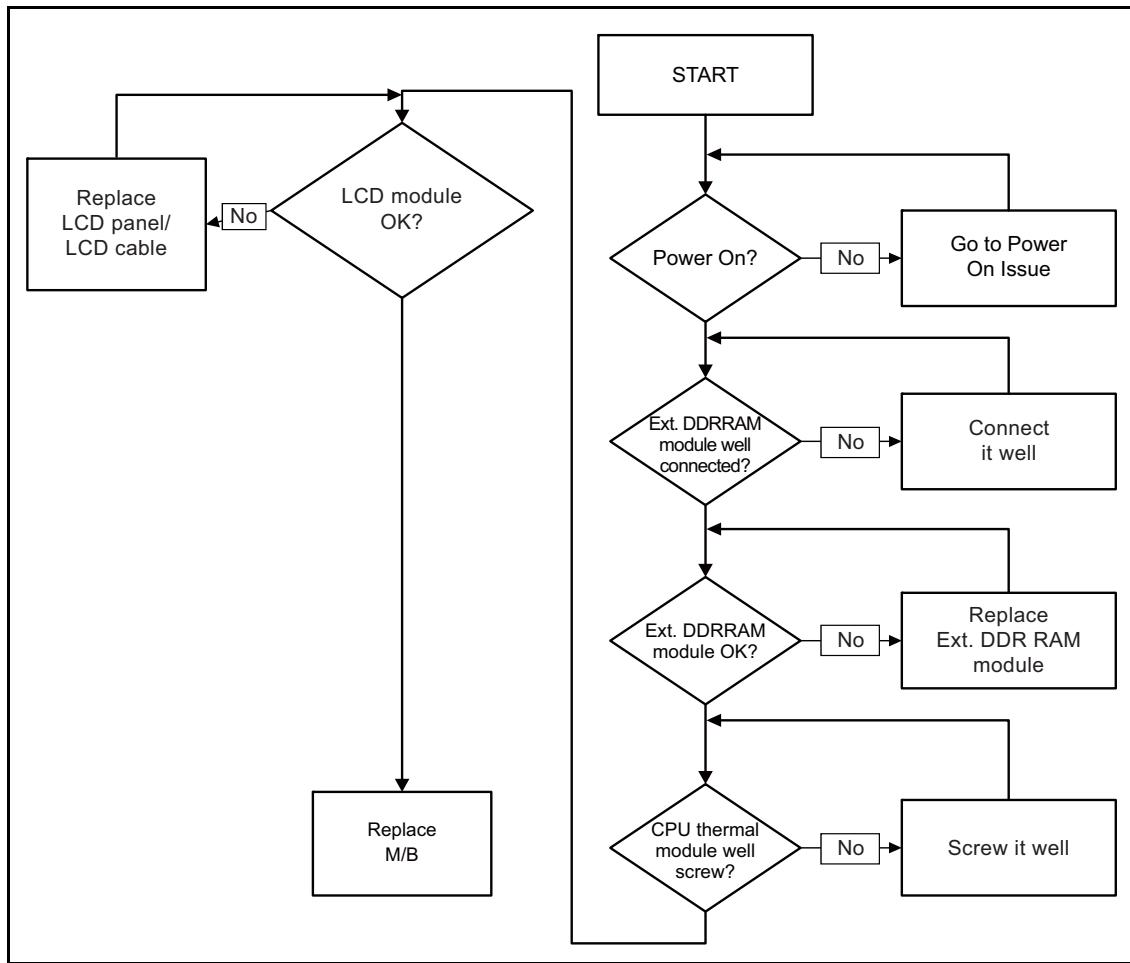


Figure 4-2. No Display Issue

No POST or Video

If the POST or video does not appear, perform the following:

1. Make sure that internal display is selected. Switching between internal and external by pressing **Fn+F5**. Reference product pages for specific model procedures.
2. Make sure the computer has power by checking for one of the following:
 - Fans start up
 - Status LEDs illuminate

If no power, refer to [Power On Issues](#).

3. Drain stored power by removing the power cable and battery. Hold the power button for 10 seconds.
4. Connect the power and reboot the computer.
5. Connect an external monitor to the computer and switch between the internal

display and the external display is by pressing ***Fn+F5***.

6. If the POST or video appears on the external display only, refer to [*LCD Picture Failure*](#).
7. Disconnect power and all external devices including port replicators or docking stations. Remove any memory cards and CD/DVD discs.
8. Start the computer. If the computer boots correctly, add the devices one by one until the failure point is discovered.
9. Reseat the memory modules.
10. Remove the drives (refer to [*Maintenance Flowchart*](#)).
11. If the issue is still not resolved, refer to [*Online Support Information*](#).

Abnormal Video

If the video appears abnormal, perform the following:

1. Boot the computer.
 - If permanent vertical/horizontal lines or dark spots appear in the same location, the LCD is faulty and should be replaced. Refer to *Disassembly Process*.
 - If extensive pixel damage is present (different colored spots in the same locations on the screen), the LCD is faulty and should be replaced. Refer to [*Maintenance Flowchart*](#).

⇒ NOTE:

Make sure that the computer is not running on battery alone as this may reduce display brightness.

2. Adjust the brightness to its highest level. Refer to the User Manual for instructions on adjusting the settings. If the display is too dim at the highest brightness setting, the LCD is faulty and should be replaced. Refer to *Disassembly Process*.
3. Check the display resolution is correctly configured:
 - Minimize or close all Windows.
 - If display size is only abnormal in an application, check the view settings and control/mouse wheel zoom feature in the application.
 - If desktop display resolution is not normal, right-click on the desktop and select Personalize Display Settings.
 - Click and drag the Resolution slider to the desired resolution.
 - Click **Apply** and check the display. Readjust if necessary.
4. Roll back the video driver to the previous version if updated.
5. Remove and reinstall the video driver.
6. Check the Device Manager to determine that:
 - The device is properly installed. There are no red Xs or yellow exclamation marks
 - There are no device conflicts
 - No hardware is listed under Other Devices
7. If the issue is still not resolved, refer to [*Online Support Information*](#).
8. Run the *Windows Memory Diagnostic* from the operating system DVD and follow the on-screen prompts.
9. If the issue is still not resolved, refer to [*Online Support Information*](#).

LCD Picture Failure

If the LCD fails, perform the following:

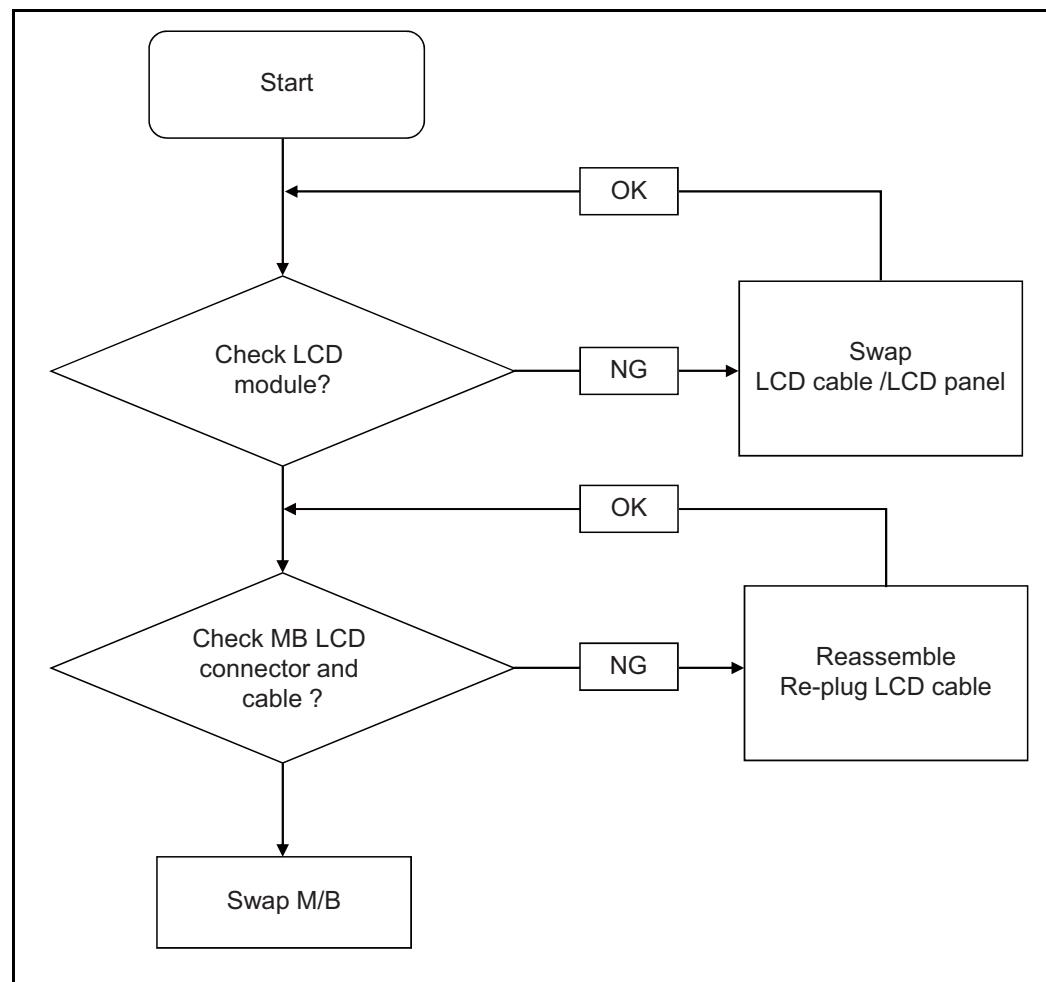


Figure 4-3. LCD Failure

Internal Keyboard Failure

If the Keyboard fails, perform the following:

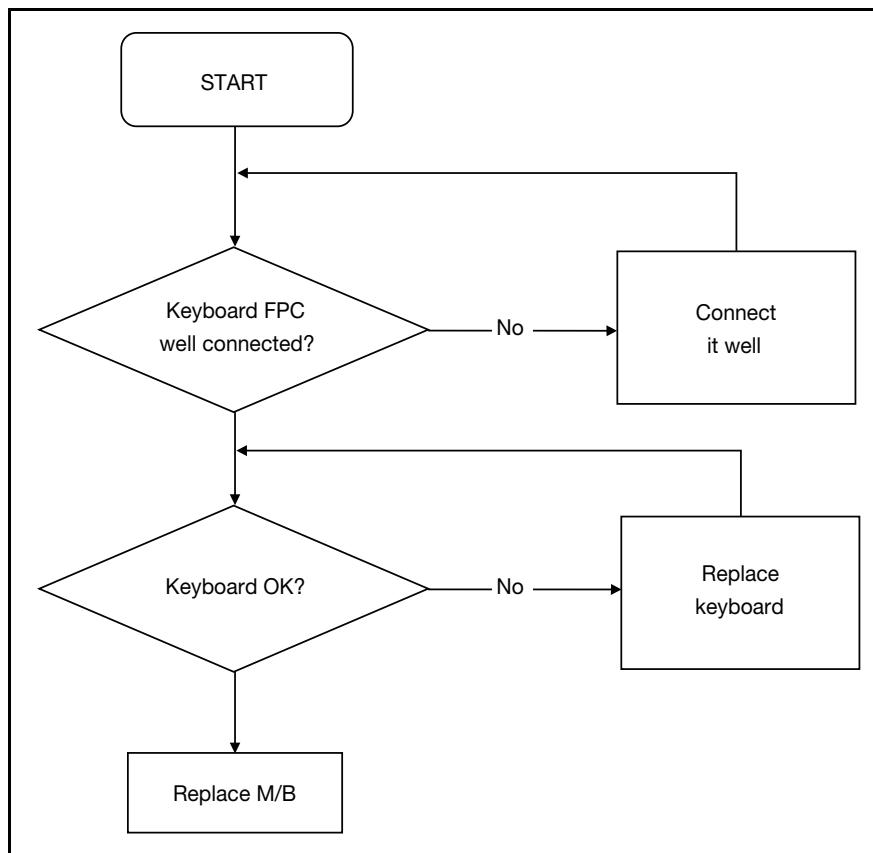


Figure 4-4. Keyboard Failure

Touchpad Failure

If the Touchpad fails, perform the following:

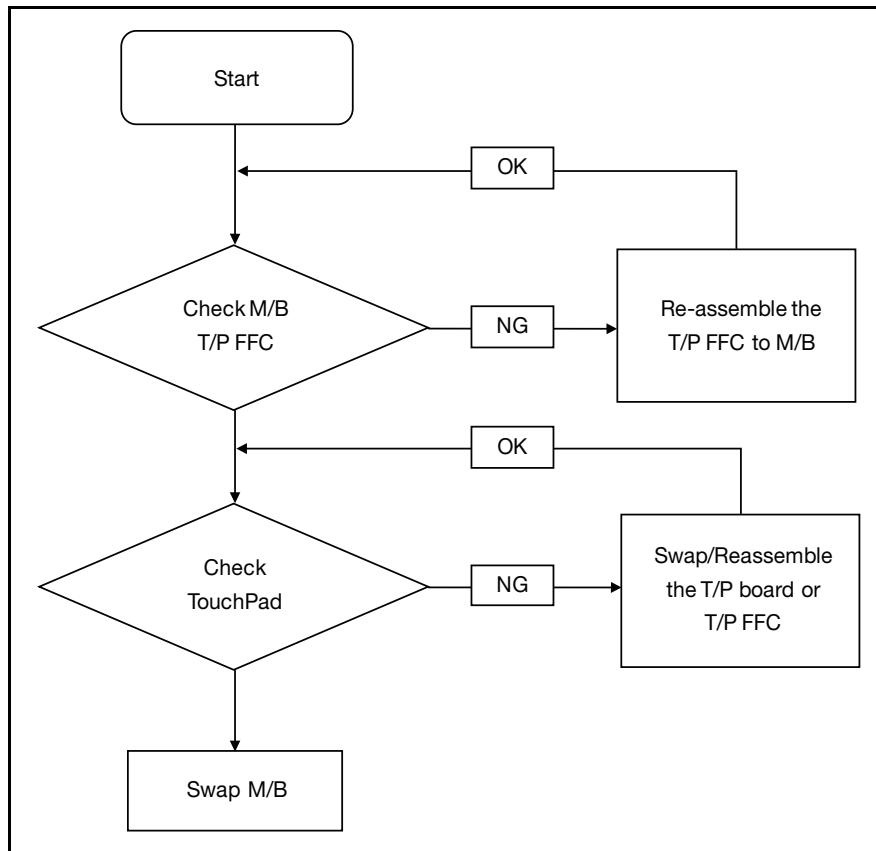


Figure 4-5. Touchpad Failure

Internal Speaker Failure

If internal Speakers fail, perform the following:

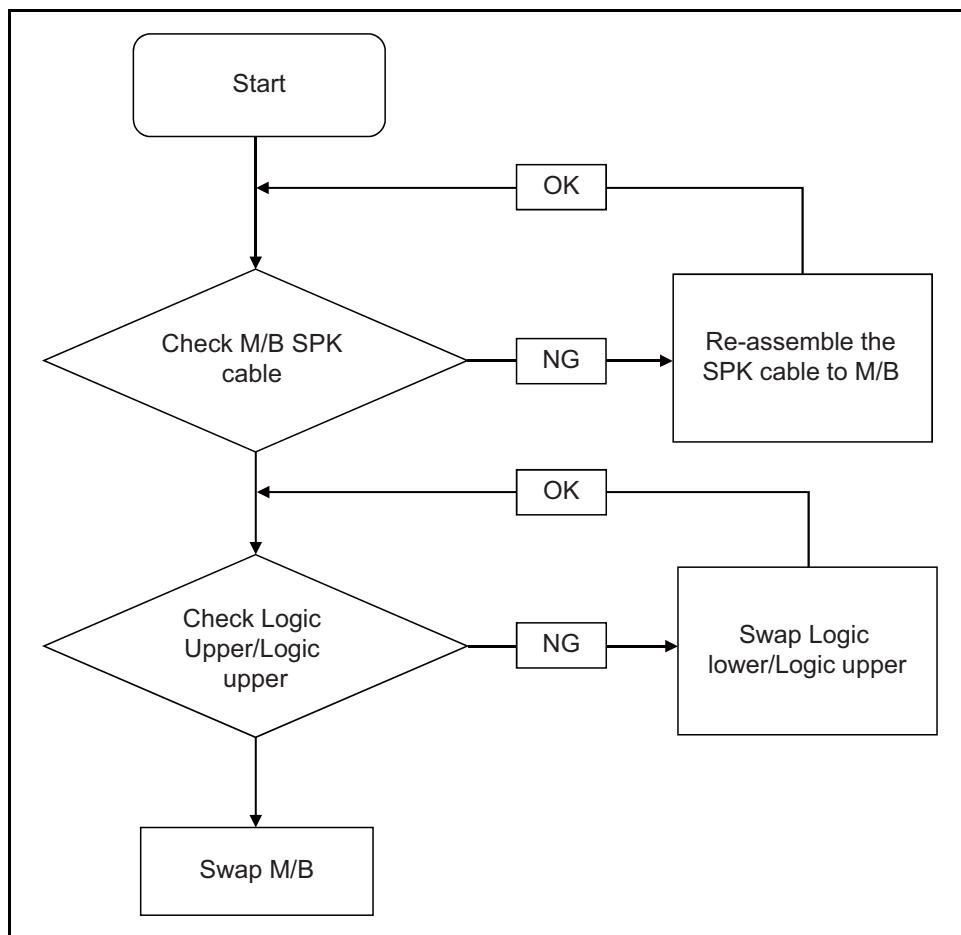


Figure 4-6. Internal Speaker Failure

Sound Problems

Perform the following, one at a time.

1. Boot the computer.
2. Navigate to **Start** → **Control Panel** → **System and Maintenance** → **System** → **Device Manager**. Check the Device Manager to determine that:
 - The device is properly installed
 - There are no red Xs or yellow exclamation marks
 - There are no device conflicts
 - No hardware is listed under Other Devices
3. If updated recently, roll back the audio driver to the previous version.
4. Remove and reinstall the audio driver.
5. Make sure that all volume controls are set mid range:

- Click the volume icon on the taskbar
- Drag the slider to 50. Confirm that the volume is not muted.
- Click Mixer to verify that other audio applications are set to 50 and not muted.

6. Navigate to **Start**→**Control Panel**→**Hardware and Sound**→**Sound**. Confirm that Speakers are selected as the default audio device (green check mark).

⇒ NOTE:

If Speakers does not show, right-click on the **Playback tab** and select **Show Disabled Devices** (clear by default).

- 7. Select Speakers and click **Configure** to start Speaker Setup. Follow the on-screen prompts to configure the speakers.
- 8. Remove any recently installed hardware or software.
- 9. Restore system and file settings from a known good date using **System Restore**.
- 10. If the issue remains, repeat step 9, selecting an earlier time and date.
- 11. Reinstall the operating system.
- 12. If the issue is still not resolved, refer to [Online Support Information](#).

Internal Microphone Failure

If internal Microphones fail, perform the following:

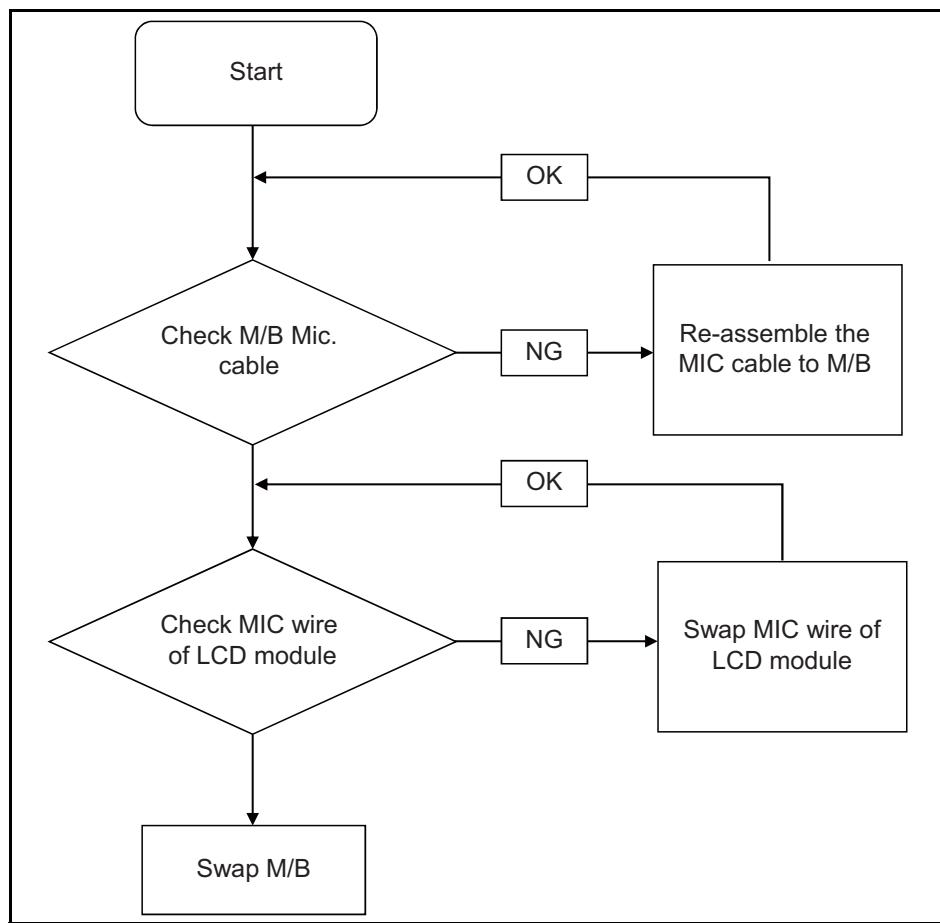


Figure 4-7. Microphone Failure

1. Check that the microphone is enabled. Navigate to **Start**→**Control Panel**→**Hardware and Sound**→**Sound** and select the Recording tab.
2. Right click on the Recording tab and select Show Disabled Devices (clear by default). The microphone appears on the Recording tab.
3. Right click on the microphone and select **Enable**.
4. Select the microphone then click **Properties**. Select the **Levels** tab.
5. Increase the volume to the maximum setting and click **OK**.
6. Test the microphone hardware:
 - Select the microphone and click **Configure**.
 - Select **Set up microphone**.
 - Select the microphone type from the list and click **Next**.
 - Follow the on-screen prompts to complete the test.
7. If the issue is still not resolved, refer to [Online Support Information](#).

USB Failure

If the USB on the right side fails, perform the following:

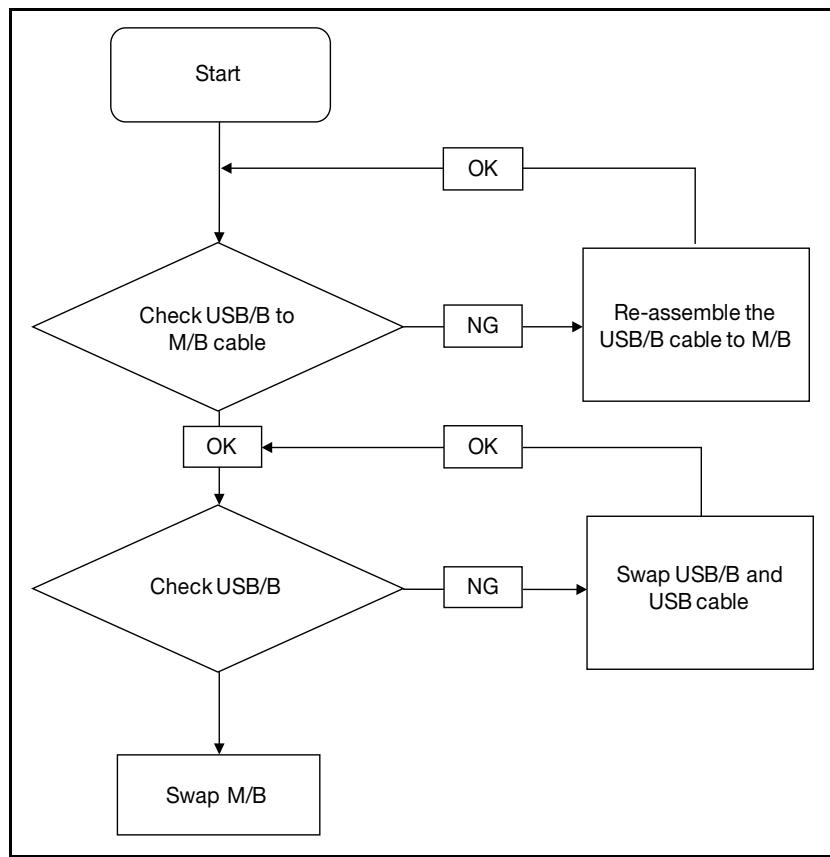


Figure 4-8. USB Failure

Other Functions Failure

1. Check if drives are functioning correctly.
2. Check if external modules are functioning correctly.
3. Change mainboard to check if current one is defective.

Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, perform the following:

1. Run the advanced diagnostic test for the system board in loop mode at least 10 times.
2. If no error is detected, do not replace any FRU.
3. If an error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

Undetermined Problems

The diagnostic problems do not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Perform the following procedures to isolate the failing FRU (do not isolate non-defective FRU).

⇒ NOTE:

Verify that all attached devices are supported by the computer.

⇒ NOTE:

Verify that the power supply being used at the time of the failure is operating correctly. (Refer to [Power On Issues](#)).

1. Remove power from the computer.
2. Visually check components for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
 - Non-Acer devices
 - Printer, mouse, and other external devices
 - Battery pack
 - Hard disk drive
 - DIMM
 - BD/CD-ROM/Diskette drive Module
 - PC Cards
4. Apply power to the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, connect the removed devices one at a time until failing FRU is found.
7. If the problem remains, replace the following FRUs:
 - System board
 - LCD assembly

Post Codes

The following are the InsydeH2O™ Functionality POST code tables. The components of the POST code table includes: SEC phase, PEI phase, DXE phase, BDS phase, CSM functions, S3 functions and ACPI functions.

Table 4-2. POST Code Range

Phase	POST Code Range
SEC	0x01 - 0x0F
PEI	0x70 - 0x9F
DXE	0x40 - 0x6F
BDS	0x10 - 0x3F
SMM	0xA0 - 0xBF
S3	0xC0 - 0xCF
ASL	0x51 – 0x55 0xE1 – 0xE4
PostBDS	0xF9 – 0xFE
InsydeH2O-DDT™ Reserve	0xD0 – 0xD7
OEM Reserve	0xE8 – 0xEB
Reserved	0xD8 – 0xE0 0xE5 – 0xE7 0xEC – 0xF8

Table 4-3. SEC Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
SEC_SYSTEM_POWER_ON	SEC	01	CPU power on and switch to Protected mode
SEC_BEFORE_MICROCODE_PATCH	SEC	02	Patching CPU microcode
SEC_AFTER_MICROCODE_PATCH	SEC	03	Setup Cache as RAM
SEC_ACCESS_CSR*	SEC	04	PCIE MMIO Base Address initial
SEC_GENERIC_MSINIT*	SEC	05	CPU Generic MSR initialization
SEC_CPU_SPEEDCFG*	SEC	06	Setup CPU speed
SEC_SETUP_CAR_OK	SEC	07	Cache as RAM test
SEC_FORCE_MAX_RATIO*	SEC	08	Tune CPU frequency ratio to maximum level
SEC_GO_TO_SECSTARTUP	SEC	09	Setup BIOS ROM cache

Table 4-3. (Continued)SEC Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
SEC_GO_TO_PEICORE	SEC	0A	Enter Boot Firmware Volume
* 3rd party relate functions – Platform dependence.			

Table 4-4. PEI Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
PEI_SIO_INIT	PEI	70	Super I/O Initialization
PEI_CPU_REG_INIT	PEI	71	CPU Early Initialization
PEI_CPU_AP_INIT*	PEI	72	Multi-processor Early Initial
PEI_CPU_HT_RESET*	PEI	73	HyperTransport Initialization
PEI_PCIE_MMIO_INIT	PEI	74	PCIE MMIO BAR Initialization
PEI_NB_REG_INIT	PEI	75	North Bridge Early Initialization
PEI_SB_REG_INIT	PEI	76	South Bridge Early Initialization
PEI_PCIE_TRAINING*	PEI	77	PCIE Training
PEI TPM INIT	PEI	78	TPM Initialization
PEI SMBUS_INIT	PEI	79	SMBUS Early Initialization
PEI_PROGRAM_CLOCK_GEN	PEI	7A	Clock Generator Initialization
PEI_IGD_EARLY_INITIAL*	PEI	7B	Internal Graphic device early Initialization
PEI_HECI_INIT*	PEI	7C	HECI Initialization
PEI_WATCHDOG_INIT*	PEI	7D	Watchdog timer Initialization
PEI_MEMORY_INIT	PEI	7E	Memory Initial for Normal boot.
PEI_MEMORY_INIT_FOR_CRISIS	PEI	7F	Memory Initial for Crisis Recovery
PEI_MEMORY_INSTALL	PEI	80	Simple Memory test
PEI_TXTPEI*	PEI	81	TXT function early Initialization
PEI_SWITCH_STACK	PEI	82	Start to use Memory
PEI_MEMORY_CALLBACK	PEI	83	Set cache for physical memory
PEI_ENTER_RECOVERY_MODE	PEI	84	Recovery device Initialization
PEI_RECOVERY_MEDIA_FOUND	PEI	85	Found Recovery image
PEI_RECOVERY_MEDIA_NOT_FOUND	PEI	86	Recovery image not found
PEI_RECOVERY_LOAD_FILE_DONE	PEI	87	Load Recovery Image completed

Table 4-4. (Continued)PEI Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
PEI_RECOVERY_START_FLASH	PEI	88	Start Flash BIOS with Recovery image
PEI_ENTER_DXEIPL	PEI	89	Loading BIOS image to RAM
PEI_FINDING_DXE_CORE	PEI	8A	Loading DXE core
PEI_GO_TO_DXE_CORE	PEI	8B	Enter DXE core
* 3rd party relate functions – Platform dependence.			

Table 4-5. DXE Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
DXE_TCGDXE*	DXE	40	TPM initial in DXE
DXE_SB_SPI_INIT*	DXE	41	South bridge SPI initialization
DXE_CF9_RESET*	DXE	42	Setup Reset service
DXE_SB_SERIAL_GPIO_INIT*	DXE	43	South bridge Serial GPIO initialization
DXE_SMMACCESS*	DXE	44	Setup SMM ACCE SS service
DXE_NB_INIT*	DXE	45	North bridge Middle initialization
DXE_SIO_INIT*	DXE	46	Super I/O DXE initialization
DXE_LEGACY_REGION*	DXE	47	Setup Legacy Region service
DXE_SB_INIT*	DXE	48	South Bridge Middle initialization
DXE_IDENTIFY_FLASH_DEVICE	DXE	49	Identify Flash device
DXE_FTW_INIT	DXE	4A	Fault Tolerant Write verification
DXE_VARIABLE_INIT	DXE	4B	Variable Service initialization
DXE_VARIABLE_INIT_FAIL	DXE	4C	Fail to initial Variable Service
DXE_MTC_INIT	DXE	4D	MTC Initial
DXE_CPU_INIT	DXE	4E	CPU Middle Initialization
DXE_MP_CPU_INIT	DXE	4F	Multi-processor Middle Initialization
DXE_SMBUS_INIT	DXE	50	SMBUS Driver Initialization
DXE_SMART_TIMER_INIT	DXE	51	8259 Initialization
DXE_PCRRTC_INIT	DXE	52	RTC Initialization
DXE_SATA_INIT*	DXE	53	SATA Controller early Initialization

Table 4-5. (Continued)DXE Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
DXE_SMM_CONTROLLER_INIT*	DXE	54	Setup SMM Control service
DXE_LEGACY_INTERRUPT*	DXE	55	Setup Legacy Interrupt service
DXE_RELOCATE_SMBASE	DXE	56	Relocate SMM BASE
DXE_FIRST_SMI	DXE	57	SMI test
DXE_VTD_INIT*	DXE	58	VTD Initial
DXE_BEFORE_CSM16_INIT	DXE	59	Legacy BIOS Initialization
DXE_AFTER_CSM16_INIT	DXE	5A	Legacy interrupt function Initialization
DXE_LOAD_ACPI_TABLE	DXE	5B	ACPI Table Initialization
DXE_SB_DISPATCH*	DXE	5C	Setup SB SMM Dispatcher service
DXE_SB_IOTRAP_INIT*	DXE	5D	Setup SB IOTRAP Service
DXE_SUBCLASS_DRIVER*	DXE	5E	Build AMT Table
DXE_PPM_INIT*	DXE	5F	PPM Initialization
DXE_HECIDRV_INIT*	DXE	60	HECIDRV Initialization
DXE_FLASH_PART_NONSUPPORT	DXE	62	Do not support flash part (which is defined in SpiDevice.c)
* 3rd party relate functions – Platform dependence.			

Table 4-6. BDS Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
BDS_ENTER_BDS	BDS	10	Enter BDS entry
BDS_INSTALL_HOTKEY	BDS	11	Install Hotkey service
BDS ASF_INIT*	BDS	12	ASF Initialization
BDS_PCI_ENUMERATION_START	BDS	13	PCI enumeration
BDS_BEFORE_PCIIO_INSTALL	BDS	14	PCI resource assign complete
BDS_PCI_ENUMERATION_END	BDS	15	PCI enumeration complete
BDS_CONNECT_CONSOLE_IN	BDS	16	Keyboard Controller, Keyboard and Mouse initialization
BDS_CONNECT_CONSOLE_OUT	BDS	17	Video device initialization
BDS_CONNECT_STD_ERR	BDS	18	Error report device initialization

Table 4-6. (Continued)BDS Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
BDS_CONNECT_USB_HC	BDS	19	USB host controller initialization
BDS_CONNECT_USB_BUS	BDS	1A	USB BUS driver initialization
BDS_CONNECT_USB_DEVICE	BDS	1B	USB device driver initialization
BDS_NO_CONSOLE_ACTION	BDS	1C	Console device initial fail
BDS_DISPLAY_LOGO_SYSTEM_INFO	BDS	1D	Display logo or system information
BDS_START_IDE_CONTROLLER	BDS	1E	IDE controller initialization
BDS_START_SATA_CONTROLLER	BDS	1F	SATA controller initialization
BDS_START_ISA_ACPI_CONTROLLER	BDS	20	SIO controller initialization
BDS_START_ISA_BUS	BDS	21	ISA BUS driver initialization
BDS_START_ISA_FDD	BDS	22	Floppy device initialization
BDS_START_ISA_SEIRAL	BDS	23	Serial device initialization
BDS_START_IDE_BUS	BDS	24	IDE device initialization
BDS_START_AHCI_BUS	BDS	25	AHCI device initialization
BDS_CONNECT_LEGACY_ROM	BDS	26	Dispatch option ROMs
BDS_ENUMERATE_ALL_BOOT_OPTION	BDS	27	Get boot device information
BDS_END_OF_BOOT_SELECTION	BDS	28	End of boot selection
BDS_ENTER_SETUP	BDS	29	Enter Setup Menu
BDS_ENTER_BOOT_MANAGER	BDS	2A	Enter Boot manager
BDS_BOOT_DEVICE_SELECT	BDS	2B	Try to boot system to OS
BDS_EFI64_SHADOW_ALL_LEGACY_ROM	BDS	2C	Shadow Misc Option ROM
BDS_ACPI_S3SAVE	BDS	2D	Save S3 resume required data in RAM
BDS_READY_TO_BOOT_EVENT	BDS	2E	Last Chipset initial before boot to OS
BDS_GO_LEGACY_BOOT	BDS	2F	Start to boot Legacy OS
BDS_GO_UEFI_BOOT	BDS	30	Start to boot UEFI OS
BDS_LEGACY16_PREPARE_TO_BOOT	BDS	31	Prepare to Boot to Legacy OS
BDS_EXIT_BOOT_SERVICES*	BDS	32	Send END of POST Message to ME via HECI
BDS_LEGACY_BOOT_EVENT	BDS	33	Last Chipset initial before boot to Legacy OS.

Table 4-6. (Continued)BDS Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
BDS_ENTER_LEGACY_16_BOOT	BDS	34	Ready to Boot Legacy OS.
BDS_RECOVERY_START_FLASH	BDS	35	Fast Recovery Start Flash.
BDS_START_SDHC_BUS	BDS	36	SDHC device initial.
BDS_CONNECT_ATA_LEGACY	BDS	37	Ata Legacy device initial.
BDS_CONNECT_SD_LEGACY	BDS	38	SD Legacy device initial.
* 3rd party relate functions – Platform dependence.			

Table 4-7. PostBDS Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
POST_BDS_NO_BOOT_DEVICE	POST_BDS	F9	No Boot Device
POST_BDS_START_IMAGE	POST_BDS	FB	UEFI Boot Start Image
POST_BDS_ENTER_INT19	POST_BDS	FD	Legacy 16 boot entry
POST_BDS_JUMP_BOOT-SECTOR	POST_BDS	FE	Try to Boot with INT 19

Table 4-8. S3 Functions POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
S3_RESTORE_MEMORY_CONTROLLER	PEI	C0	Memory initial for S3 resume
S3_INSTALL_S3_MEMORY	PEI	C1	Get S3 resume required data from memory
S3_SWITCH_STACK	PEI	C2	Start to use memory during S3 resume
S3_MEMORY_CALLBACK	PEI	C3	Set cache for physical memory during S3 resume
S3_ENTER_S3_RESUME_PEIM	PEI	C4	Start to restore system configuration
S3_BEFORE_ACPI_BOOT_SCRIPT	PEI	C5	Restore system configuration stage1
S3_BEFORE_RUNTIME_BOOT_SCRIPT	PEI	C6	Restore system configuration stage2
S3_BEFORE_RELOCATE_SMM_BASE	PEI	C7	Relocate SMM BASE during S3 resume

Table 4-8. (Continued)S3 Functions POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
S3_BEFORE_MP_INIT	PEI	C8	Multi-processor initial during S3 resume
S3_BEFORE_RESTORE_ACPI_CALLBACK	PEI	C9	Start to restore system configuration in SMM
S3_AFTER_RESTORE_ACPI_CALLBACK	PEI	CA	Restore system configuration in SMM complete
S3_GO_TO_FACS_WAKING_VECTOR	PEI	CB	Back to OS

Table 4-9. ACPI Functions POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
ASL_ENTER_S1	ASL	51	Prepare to enter S1
ASL_ENTER_S3	ASL	53	Prepare to enter S3
ASL_ENTER_S4	ASL	54	Prepare to enter S4
ASL_ENTER_S5	ASL	55	Prepare to enter S5
ASL_WAKEUP_S1	ASL	E1	System wake up from S1
ASL_WAKEUP_S3	ASL	E3	System wake up from S3
ASL_WAKEUP_S4	ASL	E4	System wake up from S4

Table 4-10. SMM Functions POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
SMM_IDENTIFY_FLASH_DEVICE	SMM	0xA0	Identify Flash device in SMM
SMM_SMM_PLATFORM_INIT	SMM	0xA2	SMM service initial
SMM_ACPI_ENABLE_START	SMM	0xA6	OS call ACPI enable function
SMM_ACPI_ENABLE_END	SMM	0xA7	ACPI enable function complete
SMM_S1_SLEEP_CALLBACK	SMM	0xA1	Enter S1
SMM_S3_SLEEP_CALLBACK	SMM	0xA3	Enter S3
SMM_S4_SLEEP_CALLBACK	SMM	0xA4	Enter S4
SMM_S5_SLEEP_CALLBACK	SMM	0xA5	Enter S5
SMM_ACPI_DISABLE_START	SMM	0xA8	OS call ACPI disable function
SMM_ACPI_DISABLE_END	SMM	0xA9	ACPI disable function complete

Table 4-11. InsydeH2ODDT Debugger POST Code Table

Functionality Name (Include\\PostCode.h)	PostCode	Description
Used by Insyde debugger	0x0D	Waiting for device connect
Used by Insyde debugger	0xD0	Waiting for device connect
Used by Insyde debugger	0xD1	InsydeH2ODDT Ready
Used by Insyde debugger	0xD2	EHCI not found
Used by Insyde debugger	0xD3	Debug port connect low speed device
Used by Insyde debugger	0xD4	DDT Cable become low speed device
Used by Insyde debugger	0xD5	DDT Cable Transmission Error (Get descriptor fail)
Used by Insyde debugger	0xD6	DDT Cable Transmission Error (Set Debug mode fail)
Used by Insyde debugger	0xD7	DDT Cable Transmission Error (Set address fail)

CHAPTER 5

Jumper and Connector Locations



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Jumper and Connector Locations

Mainboard Jumper and Connector Locations

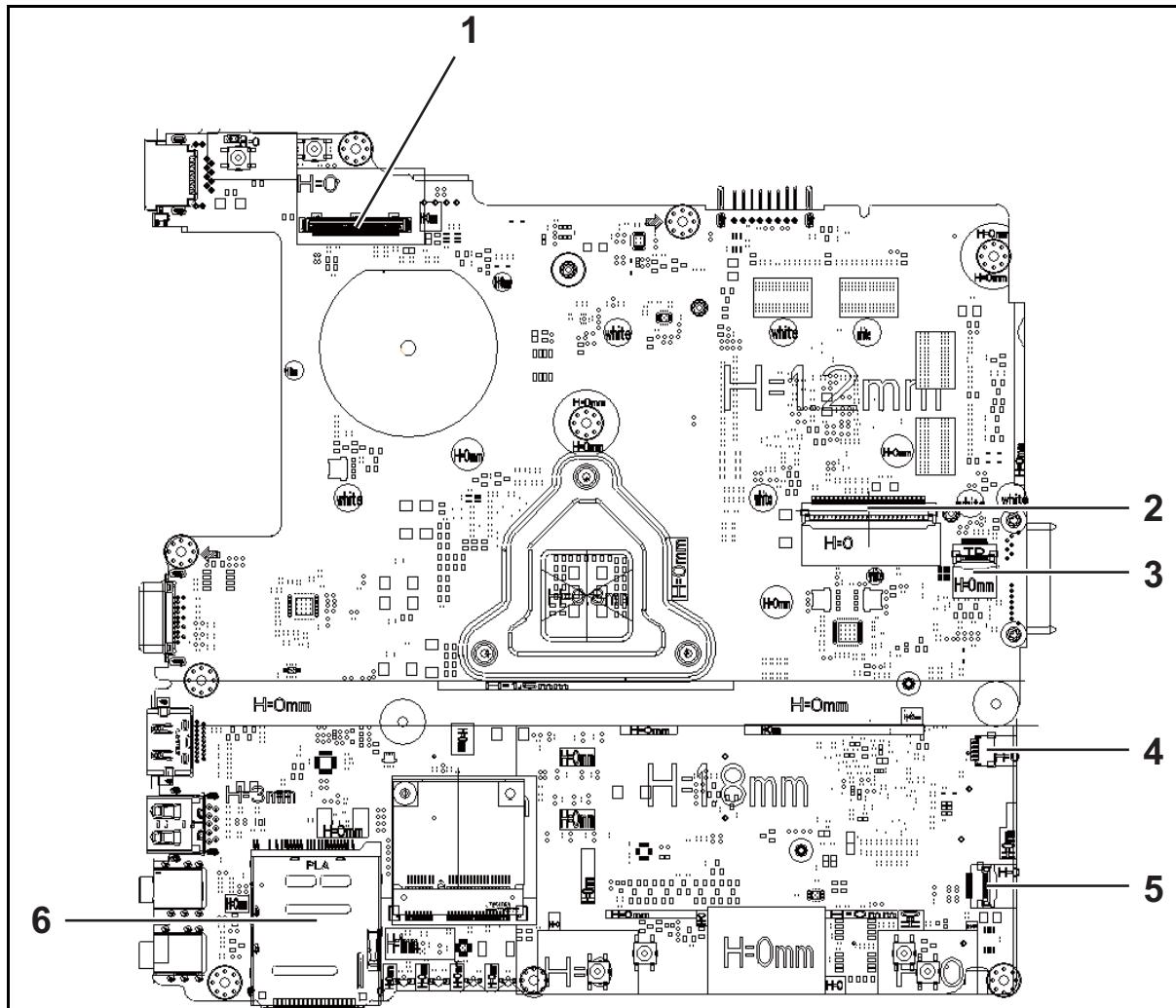


Figure 5-1. Mainboard Top

Table 5-1. Mainboard Top

Item	Description	Item	Description
1	LVDS Connector	4	Bluetooth Connector
2	Keyboard Connector	5	USB Connector
3	Touchpad Connector	6	Cardreader Connector

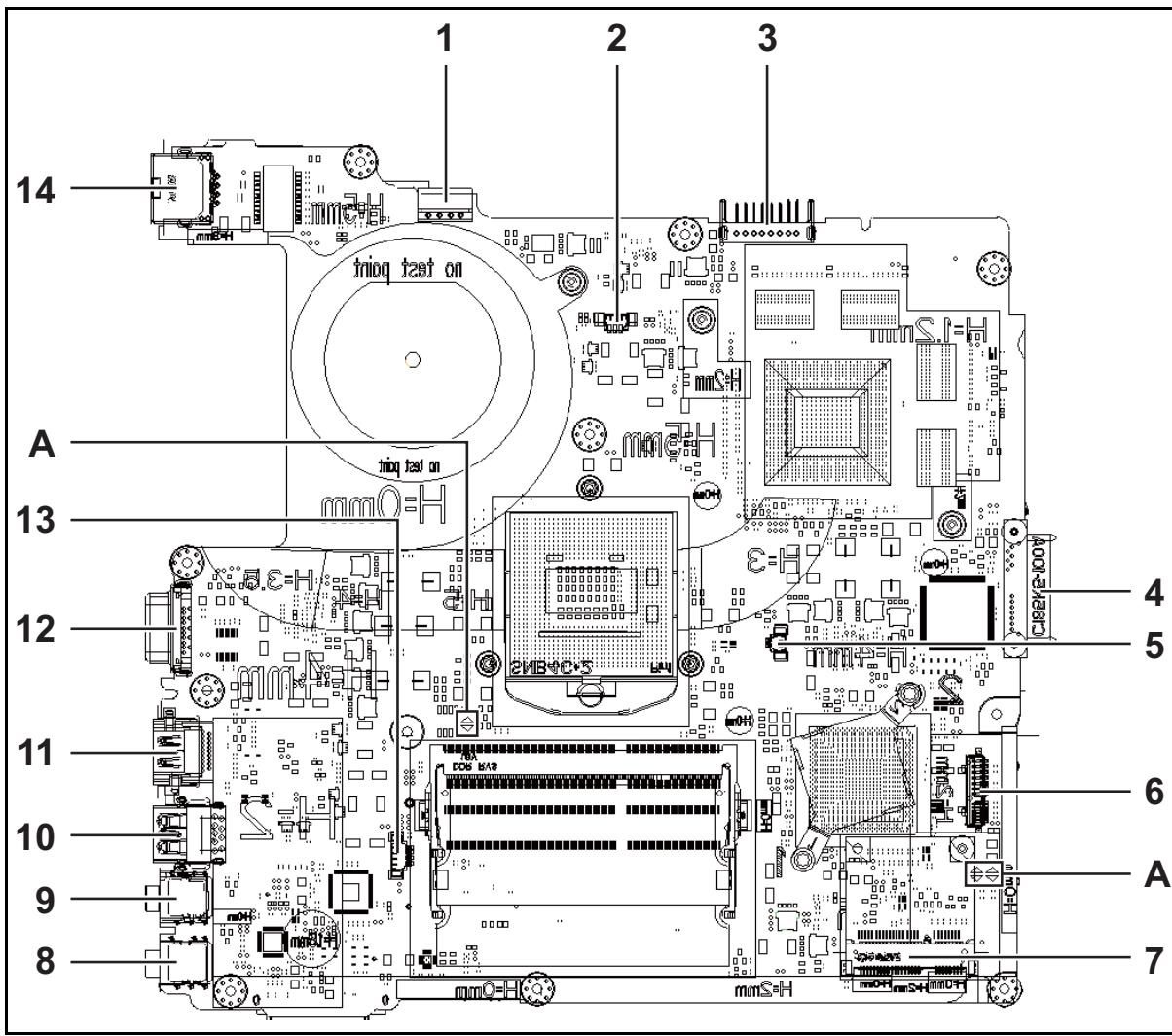


Figure 5-2. Mainboard Bottom

Table 5-2. Mainboard Bottom

Item	Description	Item	Description
1	DC-IN Connector	9	Microphone Connector
2	Fan Connector	10	USB Connector
3	Battery Connector	11	HDMI Connector
4	ODD Connector	12	VGA Connector
5	RTC battery Connector	13	Speaker Connector
6	HDD Connector	14	RJ-45 Connector
7	Mini Card Connector	A	CMOS Jumper
8	Headphone Connector		

Clearing Password Check and BIOS Recovery

This section provides users with the standard operating procedures of clearing password and BIOS recovery for the Aspire E1-431/E1-431G & E1-471/E1-471G. The machine provides one Hardware Open Gap on main board for clearing password check, and one hot key for enabling BIOS Recovery.

Clearing Password Check

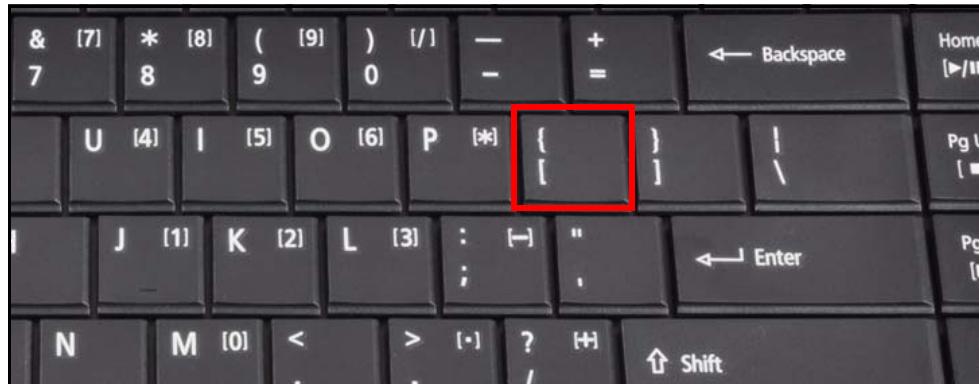
⇒ NOTE:

The following procedure is only for clearing BIOS Password (Supervisor Password and User Password).

Steps for Clearing BIOS Password Check

If users set BIOS Password (Supervisor Password and/or User Password) for a security reason, BIOS will ask the password during systems POST or when systems enter to BIOS Setup menu. However, once it is necessary to bypass the password check, users need to clear the password by the following steps:

1. Press **Power** button.
2. Press **/**key before Acer logo disappears ([Figure 5-3](#)).



[Figure 5-3. Keyboard Key Location](#)

3. Select Boot Option item 'USB HDD' as highlighted in [Figure 5-4](#) and press **Enter** to exit the BIOS Boot Option menu.
4. Execute **ClearPwd.EXE** under the DOS mode.
5. When message Clear the SU Pws completely is displayed, supervisor password has been cleared.
6. Restart the system. Press **F2** to enter BIOS Setup menu.
7. If there is no Password request, BIOS Password is cleared up.
8. If a password is requested, repeat Steps 1 through 5.

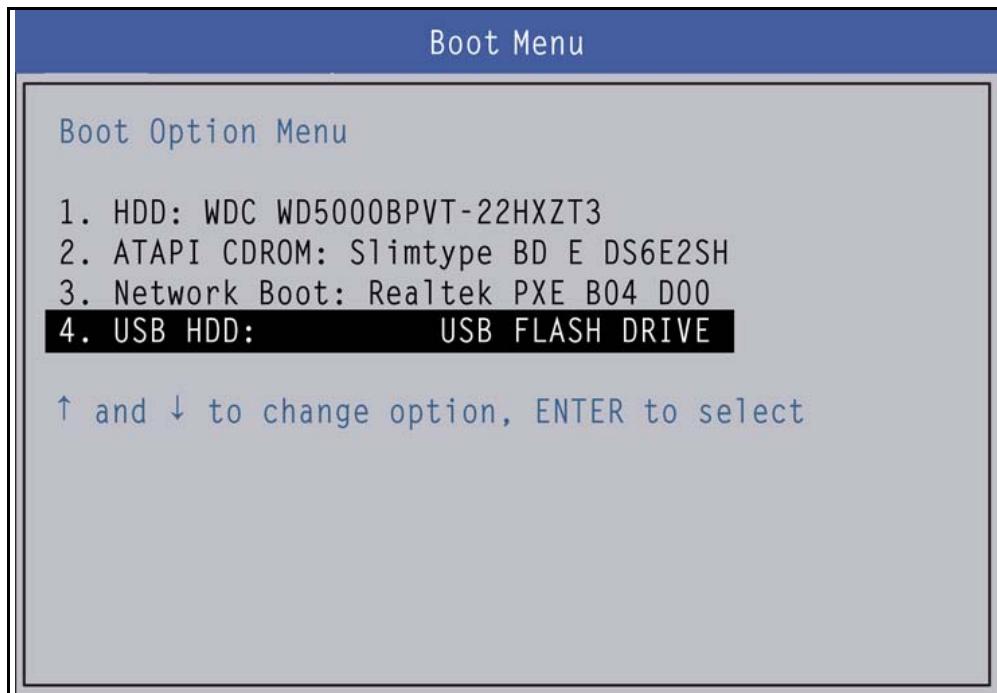


Figure 5-4. BIOS Boot Option Meun

⇒ NOTE:

If BIOS setup menu item 'Supervisor Password Is' and 'User Password Is' is set to Set, and 'Password on Boot' is set to Enabled, then Crisis Recovery disc must be used.

BIOS Recovery by Crisis Disk

BIOS Recovery Boot Block

BIOS Recovery Boot Block is a special block of BIOS. It is used to boot up the system with minimum BIOS initialization. Users can enable this feature to restore the BIOS firmware to a successful one once the previous BIOS flashing process failed.

BIOS Recovery Hot Key

The system provides a function hot key, **<Fn + Esc>**, for enable BIOS Recovery process when system is powered on during BIOS POST. To use this function, it is strongly recommended to have the AC adapter and Battery present. If this function is enabled, the system will force the BIOS to enter a special BIOS block, called Boot Block.

Steps for BIOS Recovery from USB Storage

⇒ NOTE:

Prior to performing the recovery, prepare a Crisis USB key. The Crisis USB key is created by executing the Crisis Disk program on another system with Windows 7 OS.

To Create a Crisis USB key, perform the following:

1. Format the USB storage disk using the Fast Format option.
2. Save ROM file (file name: `ZQS.fd`) to the root directory of USB storage. Make sure that there is no other BIOS file saved in the same directory.
3. Plug USB storage into USB port.
4. Press **<Fn + Esc>** button then plug in AC power.
5. The Power button flashes once.
6. Press **Power** button to initiate system CRISIS mode.
7. When CRISIS is complete, the system auto restarts with a workable BIOS.
8. Update the latest version BIOS for this machine by regular BIOS flashing process.

CHAPTER 6

FRU (Field Replaceable Unit) List

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FRU (Field Replaceable Unit) List

This chapter provides users with a FRU (Field Replaceable Unit) listing in global configurations for the Aspire E1-431/E1-431G & E1-471/E1-471G. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

⇒ NOTE:

WHEN ORDERING FRU PARTS, check the most up-to-date information available on the regional web or channel. Part number changes will not be noted on the printed Service Guide. For Acer AUTHORIZED SERVICE PROVIDERS, the Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. Users MUST use the local FRU list provided by the regional Acer office to order FRU parts for repair and service of customer machines.

⇒ NOTE:

To scrap or to return the defective parts, users should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by the regional Acer office on how to return it.

Exploded Diagrams

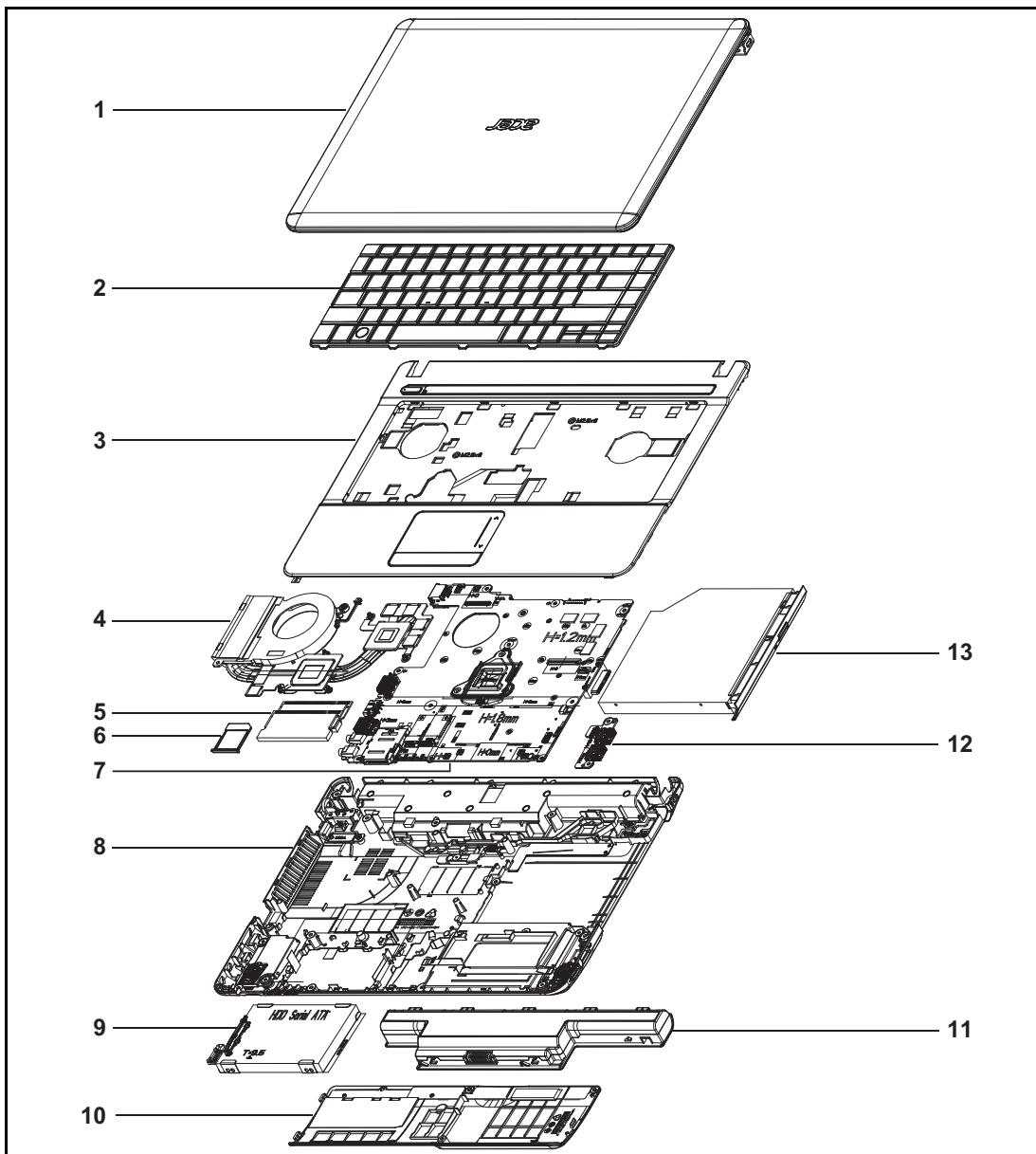


Figure 6-1. System Exploded Diagram

Table 6-1. System Exploded Diagram

No.	Description	Acer Part No.
1	LCD Assembly	LZ.21000.177
2	Keyboard	NK.I1413.002
3	Upper Case	LZ.21000.178
4	Thermal Module Assembly	60.RYYN7.013
5	System Memory	KN.2GB03.025

Table 6-1. System Exploded Diagram

No.	Description	Acer Part No.
6	SD Dummy Card	42.RYYN7.001
7	MainBoard	NB.M0Q11.001
8	Lower Case	60.RYYN7.006
9	HDD Assembly	KH.50004.004
10	Base Door	60.RYYN7.007
11	Battery Module	BT.0060G.001
12	USB Board	55.RYYN7.001
13	ODD Assembly	KU.00805.051

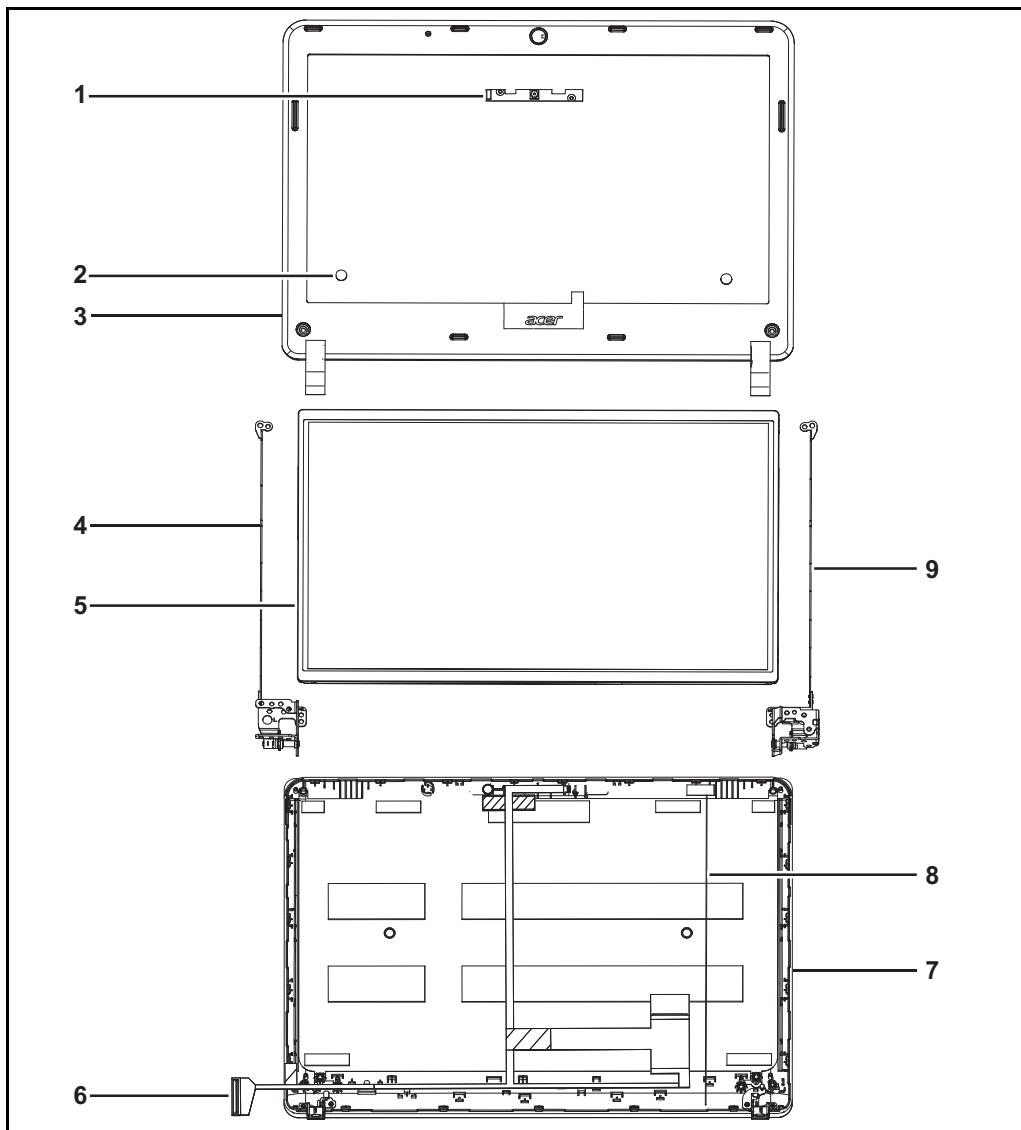


Figure 6-2. LCD Assembly Exploded Diagram

Table 6-2. LCD Assembly Exploded Diagram

No.	Description	Acer Part No.
1	Camera Module	AM.21400.095
2	LCD Screw Mylar	47.R6Z07.003
3	LCD Bezel	LZ.21000.009
4	LCD Bracket (Left)	33.RYYN7.003
5	LCD LED Panel	LK.14005.010
6	LVDS Cable	50.RYYN7.006
7	LCD Cover	LZ.21000.177
8	Antenna	LZ.23500.006

Table 6-2. LCD Assembly Exploded Diagram

No.	Description	Acer Part No.
9	LCD Bracket (Right)	33.RYYN7.004

FRU List

Table 6-3. FRU List

Category	Description	Acer Part No.
ADAPTER		
	Adapter DELTA 65W 19V 1.7x5.5x11 Yellow ADP-65VH BA, LV5, Low profile LED LF	AP.06501.033
	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-69AW, LV5, Low profile LED LF	AP.06503.029
	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-86AW, LV5, Low profile LF	AP.06503.031
	Adapter Chicony Power 65W 19V 1.7x5.5x11 Yellow CPA09-A065N1, LV5, low profile LF	AP.0650A.017
	Adapter Chicony Power 65W 19V 1.7x5.5x11 Yellow A065R035L / A11-065N1A, LV5, low profile LF	AP.0650H.003
	Adapter DELTA 90W 19V 1.7x5.5x11 Blue ADP-90MD BBA, low profile, LV5 LF	AP.09001.032
	Adapter LITE-ON 90W 19V 1.7x5.5x11 Blue PA-1900-32AW, LV5, Low profile LF	AP.09003.024
	Adapter Chicony Power 90W 19V 1.7x5.5x11 Blue A10-090P3A / A090A029L, LV5 low profile LF	AP.0900H.001
BATTERY		
	Battery SANYO AS10D31 Li-Ion 3S2P SANYO 6 cell 4400mAh Main COMMON new IC BQ8055	BT.00603.124
	Battery SONY AS10D41 Li-Ion 3S2P SONY 6 cell 4400mAh Main COMMON ID:AS10D41	BT.00604.049
	Battery PANASONIC AS10D51, for new IC max1787 Li-Ion 3S2P PANASONIC 6 cell 4400mAh Main COMMON	BT.00605.072
	Battery SAMSUNG AS10D61 Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D61	BT.00606.008
	Battery SIMPLO AS10D73 Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON ID:AS10D73	BT.00607.126
	Battery SIMPLO AS10D75 Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D75	BT.00607.127
	Battery SIMPLOID:AS10D73, for HSFLi-Ion 3S2PLGC 6cell 4400mAh Main COMMON	BT.00607.136

Table 6-3. FRU List

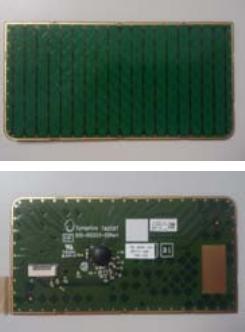
Category	Description	Acer Part No.
	Battery SIMPLIO ID:AS10D75, for HSF Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON	BT.00607.137
	Battery LGC AS10D81 Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON ID:AS10D81	BT.0060G.001
BOARD		
	Foxconn Wireless LAN Atheros HB125 1x1 BGN	NI.23600.085
	Liteon Wireless LAN Atheros HB125 1x1 BGN	NI.23600.086
	Foxconn Wireless LAN Broadcom 4313 IPA 1x1 BGN	NI.23600.090
	Liteon Wireless LAN Realtek RTL8188CE-VL 1x1 BGN	NI.23600.108
	USB IO board	55.RYYN7.001
	TOUCH PAD TTM-00540-014	TBD
CABLE		
	POWER CORD UK 3PIN	27.A03V7.004
	POWER CORD V943B30001218008 DANISH 3P	27.A03V7.006
	POWER CORD AF-S (INDIA)	27.A50V7.001
	POWER CORD AU W/LABEL (3 PIN)	27.A50V7.003
	POWER CORD V50CB3T3012180QD TW-110V,3P	27.A99V7.002
	POWER CORD(SWI)1.8M 3PBLACK FZ010008-011	27.A99V7.004
	POWER CORD ITALIAN 3PIN	27.A99V7.005
	POWER CORD ARGENTINE 3 PIN BLACK	27.S0207.001
	POWER CORD BRAZIL IMETRO 3 PIN	27.S0607.001
	POWER CORD(S.A) 1.8M 3BLACK FZ010008-006	27.T48V7.001

Table 6-3. FRU List

Category	Description	Acer Part No.
	POWER CORD(EU) 1.8M 3PBLACK FM010008-010	27.TATV7.001
	POWER CORD PRC 3P Y536B30001218008	27.TATV7.004
	POWER CORD(ISR)1.8M 3PBLK FZ010008-038	27.TATV7.005
	POWER CORD US 3PIN ROHS	27.TAXV7.001
	POWER CORD JAPAN	27.TAXV7.003
	DC-IN CABLE 65W	50.RYYN7.002
	DC-IN CABLE 90W	50.RYYN7.001
	FFC -TP TO MB	50.RYYN7.003
	Antenna	TBD
CASE/COVER/BRACKET ASSEMBLY		
	Lower Case	60.RYYN7.006
 	Upper Case	LZ.21000.178
	Base Door	60.RYYN7.007
	Support BRACKET	33.RR607.003

Table 6-3. FRU List

Category	Description	Acer Part No.
	DUMMY CARD	42.RYYN7.001
CPU/PROCESSOR		
	CPU Intel Core i3 i3-2350M PGA 2.3G 35W 2/4 -DC	KC.23501.DMP
	CPU Intel Core-2370M PGA 2.4G 35W 2/4	KC.23701.DMP
	CPU Intel Core i3 i3-3110M PGA 2.3G 1600 35W Ivy Bridge	KC.31101.DMP
	CPU Intel Celeron B815 PGA 1.6G 35W DDR3-1333	KC.81501.CMB
	CPU Intel Pentium Dual-Core B960 PGA 35W DDR3-1333 -DC	KC.96001.DPB
	CPU Intel Pentium Dual-Core B970 PGA 35W DDR3-1333 -DC	KC.97001.DPB
DVD RW DRIVE		
	ODD PIONEER Super-Multi DRIVE 12.7mm Tray DL 8X DVR-TD11RS LF W/O bezel 1.01 SATA HF + ZP (HME OPU)	KU.00805.051
	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8B0AW LF+HF W/O bezel SATA (Win7)	KU.00807.079
	ODD HLDS Super-Multi DRIVE 12.7mm Tray DL 8X GT51N LF W/O bezel SATA Zero Power Supported (HF + Windows 7)	KU.0080D.059
	ODD PLDS Super-Multi DRIVE 12.7mm Tray 8X DS-8A8SH LF+HF W/O bezel SATA	KU.0080F.021
	ODD BEZEL SUPER MULTI ASSY S.P	42.RYYN7.003
	ODD BRACKET	33.RYYN7.002

Table 6-3. FRU List

Category	Description	Acer Part No.
HDD/HARD DISK DRIVE		
	HDD SEAGATE 2.5" 5400rpm 320GB ST320LT020/9YG142-188, Sapta 15,320G/P SATA 8MB LF+HF F/W:0001SDM1 7mmzh	KH.32001.021
	HDD SEAGATE 2.5" 5400rpm 320GB 9WS14C-188 ST320LT012, Yarra 500G/P, 7mmzh SATA 8MB LF+HF F/W:0001SDM1	KH.32001.024
	HDD TOSHIBA 2.5" 5400rpm 320GB MK3259GSXP, Capricorn 3BS, 375G/P, 4K drive SATA 8MB LF+HF F/W:GN003J 4K	KH.32004.005
	HDD HGST 2.5" 5400rpm 320GB HTS543232A7A384,0J28213,Eagle B7, 320G/P 7mmzh SATA 8MB LF+HF F/W:DA4788	KH.32007.017
	HDD WD 2.5" 5400rpm 320GB WD3200BPVT-22JJ5T0, ML320S-AF2, 320G/P, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.32008.024
	HDD SEAGATE 2.5" 5400rpm 500GB ST9500325AS,9HH134-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.50001.017
	HDD SEAGATE 2.5" 5400rpm 500GB 9WS142-188 ST500LT012, Yarra 500G/P, 7mmzh SATA 8MB LF+HF F/W:0001SDM1	KH.50001.030
	HDD TOSHIBA 2.5" 5400rpm 500GB MK5059GSXP, Capricron 3BS, 375G/P SATA 8MB LF+HF F/W:GN003J 4K	KH.50004.003
	HDD HGST 2.5" 5400rpm 500GB HTS545050A7E380, Jaguar B7,0J23335, 500G/P SATA 8MB LF+HF F/W:DA4837	KH.50007.023
	HDD WD 2.5" 5400rpm 500GB WD5000BPVT-22HXZT3, ML375M-AF2, 375G/P, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.50008.024
	HDD TOSHIBA 2.5" 5400rpm 750GB MK7559GSX, 375G/P, Capricorn BS, 4K drive SATA 8MB LF+HF F/W:GNDD3J	KH.75004.001
	HDD HGST 2.5" 5400rpm 750GB HTS547575A9E384, Jet B, 375G/P SATA 8MB LF F/W:DA3872	KH.75007.004
	HDD WD 2.5" 5400rpm 750GB WD750BPVT-22HXZT3, ML375M-AF2, 375G/P, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.75008.011

Table 6-3. FRU List

Category	Description	Acer Part No.
	HDD CONN. CABLE	50.RHS07.009
	HDD BRACKET	33.RHS07.005
KEYBOARD		
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black Arabic Y2010 Acer Legend	NK.I1413.02Q
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Belgium Y2010 Acer Legend	NK.I1413.02R
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Brazilian Portuguese Y2010 Acer Legend	NK.I1413.02S
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Bulgaria Y2010 Acer Legend	NK.I1413.02T
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black CZ/SK Y2010 Acer Legend	NK.I1413.02U
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black Chinese Y2010 Acer Legend	NK.I1413.02V
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Danish Y2010 Acer Legend	NK.I1413.02W
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black FR/Arabic Y2010 Acer Legend	NK.I1413.02X

Table 6-3. FRU List

Category	Description	Acer Part No.
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black French Y2010 Acer Legend	NK.I1413.02Y
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black German Y2010 Acer Legend	NK.I1413.02Z
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black Greek Y2010 Acer Legend	NK.I1413.030
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Hungarian Y2010 Acer Legend	NK.I1413.031
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Italian Y2010 Acer Legend	NK.I1413.032
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black Korean Y2010 Acer Legend	NK.I1413.034
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Nordic Y2010 Acer Legend	NK.I1413.035
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Norwegian Y2010 Acer Legend	NK.I1413.036
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Portuguese Y2010 Acer Legend	NK.I1413.037
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black Russian Y2010 Acer Legend	NK.I1413.038

Table 6-3. FRU List

Category	Description	Acer Part No.
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black SLO/CRO Y2010 Acer Legend	NK.I1413.039
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Spanish Y2010 Acer Legend	NK.I1413.03A
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Sweden Y2010 Acer Legend	NK.I1413.03B
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Swiss/G Y2010 Acer Legend	NK.I1413.03C
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black Thailand Y2010 Acer Legend	NK.I1413.03D
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black Turkish Y2010 Acer Legend	NK.I1413.03E
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black UK Y2010 Acer Legend	NK.I1413.03F
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black US International Y2010 Acer Legend	NK.I1413.03G
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 88KS Black US International w/ Hebrew Y2010 Acer Legend	NK.I1413.03H
	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard 89KS Black US w/ Canadian French Y2010 Acer Legend	NK.I1413.03J

Table 6-3. FRU List

Category	Description	Acer Part No.
LCD		
	LCD MODULE	
	LED LCD CMI 14" WXGA Glare N140BGE-L22 LF 200nit 10ms 650:1	KL.1400D.002
	LED LCD AUO 14" WXGA Glare B140XW01 V8 0A LF 220nit 8ms 500:1 (power saving)	LK.14005.010
	LED LCD AUO 14" WXGA Glare B140XTN01.0 LF 200nit 8ms 500:1 (eDP)	LK.14005.018
	LED LP140WH4-TLC1 LF 220nit 16ms	LK.14008.009
	LED LCD LPL 14" WXGA Glare LP140WH4-TPA1 LF 220nit 16ms 500:1 (eDP)	LK.14008.012
	LED LCD CMI 14" WXGA Glare BT140GW01 V6	LK.1400D.008
	LED LCD CMO 14" WXGA Glare N140BGE-E22 LF 200nit 10ms 650:1 (eDP)	LK.1400D.010
 	LCD COVER W/ANTENNA - BLACK	LZ.21000.177
	LCD BEZEL	LZ.21000.009
	LCD HINGE - L	33.RYYN7.003

Table 6-3. FRU List

Category	Description	Acer Part No.
	LCD HINGE - R	33.RYYN7.004
	LCD CABLE	50.RYYN7.006
CAMERA		
	Liteon 1.3M HD LT_2659_AU	AM.21400.095
	Suyin 1.3M HD SY_2659_AU	AM.21400.097
	Liteon 1.3M HD LT_6A1(TSV)_SP (9A)	AM.21400.100
	Suyin 1.3M HD SY_6A1(TSV)_SP (9A)	AM.21400.102
	Suyin 1.3M HD SY_HN161_AU	AM.21400.112
	Liteon 1.3M HD LT_HN161_SP	AM.21400.115
	Liteon HD LT_OV9726_SP 3.5mm	NC.21411.002
	Chicony HD CH_OV9726_AU 3.5mm	NC.21411.006
MAINBOARD		
	UMA	NB.M0Q11.001
	Discrete	NB.M0T11.001
MEMORY		
	Memory NANYA SO-DIMM DDRIII 1333 2GB NT2GC64B88G0NS-CG LF+HF	KN.2GB03.025
	Memory MICRON SO-DIMM DDRIII 1333 2GB MT8KTF25664HZ-1G4M1 LF+HF 256*8 46nm V79D 1.35V	KN.2GB04.019
	Memory KINGSTON SO-DIMM DDRIII 1333 2GB ACR256X64D3S13C9G LF+HF	KN.2GB07.006
	Memory ELPIDA SO-DIMM DDRIII 1600 2GB EBJ20UE8BDU0-GN-F	KN.2GB09.012
	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5773DH0-CH9 LF 256*8	KN.2GB0B.030

Table 6-3. FRU List

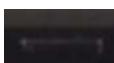
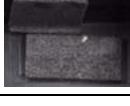
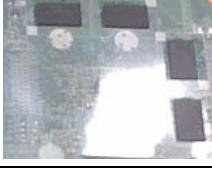
Category	Description	Acer Part No.
	Memory A-DATA SO-DIMM DDRIII 1333 2GB AD73I1B0873EV LF+HF	KN.2GB0C.008
	Memory HYNIX SO-DIMM DDRIII 1333 2GB HMT325S6CFR8C-H9 LF+HF 256x8 38nm	KN.2GB0G.031
	Memory NANYA SO-DIMM DDRIII 1333 4GB NT4GC64B8HG0NS-CG (2G bit)	KN.4GB03.009
	Memory MICRON SO-DIMM DDRIII 1333 4GB MT16KTF51264HZ-1G4M1 LF+HF 256*8 46nm V79D 1.35V	KN.4GB04.005
	Memory KINGSTON SO-DIMM DDRIII 1333 4GB ACR512X64D3S13C9G LF+HF	KN.4GB07.001
	Memory ELPIDA SO-DIMM DDRIII 1600 4GB EBJ40UG8BBU0-GN-F LF+HF 512*8 38nm	KN.4GB09.005
	Memory SAMSUNG SO-DIMM DDRIII 1333 4GB M471B5273DH0-CH9 LF 256*8 35nm	KN.4GB0B.015
	Memory A-DATA SO-DIMM DDRIII 1333 4GB AD73I1C1674EV LF+HF	KN.4GB0C.001
	Memory HYNIX SO-DIMM DDRIII 1333 4GB HMT351S6CFR8C-H9 LF+HF 256x8 38nm	KN.4GB0G.012
THERMAL MODULE		
	THERMAL MODULE	
SPEAKER		
	SPEAKER SET (W/ R/L)	23.RYYN7.001
MISCELLANEOUS		
	LCD RUBBER - UP	47.RYYN7.001
	LCD RUBBER - MIDDLE	47.RYYN7.002

Table 6-3. FRU List

Category	Description	Acer Part No.
	RUBBER FOOT - FRONT	47.RYYN7.003
	RUBBER FOOT - BACK	47.RYYN7.004
	RUBBER HDD - RIGHT	47.RYYN7.005
	RUBBER HDD - LEFT	47.RYYN7.006
	KB SUPPORT MYLAR	47.RYYN7.007
	LCD SCREW MYLAR	47.R6Z07.003

Screw List

Table 6-4. Screw List

CATEGORY	Description	Acer Part No.
	SCREW M2.5*6-I(BNI)(NYLOK)	86.A08V7.004
	SCREW M2.5*4.0-I(NI)(NYLOK)	86.D01V7.001
	SCREW M2*3.0 I (BNI,NYLOK)IRON	86.SA107.001
	SCREW M3*0.5+3.5I	86.TDY07.003
	SCREW M2-0.4*2-I(BNI)(NYLOK)(7,0.6)IRON	86.W4107.002

CHAPTER 7

Model Definition and Configuration



Acer Aspire E1-431.....	7-3
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Model Definition and Configuration

Acer Aspire E1-431

Table 7-1. RO, Description

Model	RO	Country	Acer Part No	Description
E1-431-B81 2G32Mnks	WW	WW	N9.M0RWW.001	E1-431-B812G32Mnks W7HP64ASWW1 MC UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_ES62SP1
E1-431-B81 2G32Mnks	AAP	India	NX.M0RSI.001	E1-431-B812G32Mnks LINPUSAIN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11
E1-431-B81 2G32Mnks	AAP	Thailand	NX.M0RST.003	E1-431-B812G32Mnks LINPUSATH1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-431-B81 2G32Mnks	AAP	Vietnam	NX.M0RSV.001	E1-431-B812G32Mnks LINPUSAVN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11
E1-431-B81 2G32Mnks	AAP	India	NX.M0RSI.002	E1-431-B812G32Mnks W7HB64INASIN1 MC UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-431-B81 2G32Mnks	AAP	Indonesia	NX.M0RSN.001	E1-431-B812G32Mnks LINPUSAID1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_ID22
E1-431-B81 2G32Mnks	PA	ACLA-Spanish	NX.M0RAL.001	E1-431-B812G32Mnks LinpusMGAEA1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_XS41
E1-431-B81 2G32Mnks	PA	ACLA-Spanish	NX.M0RAL.010	E1-431-B812G32Mnks EM W7ST32EMASEA1 MC UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_PT22SP1
E1-431-B81 2G32Mnks	AAP	India	NX.M0RSI.003	E1-431-B812G32Mnks LinpusMGAIN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_XS11

Table 7-1. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-431-B81 2G50Mnks	WW	GCTWN	N9.M0RTW.001	E1-431-B812G50Mnks LINPUSAWW1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_ENX1
E1-431-B81 2G50Mnks	WW	WW	N9.M0RW.002	E1-431-B812G50Mnks LINPUSAWW1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-431-B81 2G50Mnks	AAP	Thailand	NX.M0RST.001	E1-431-B812G50Mnks LINPUSATH1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_TH51
E1-431-B81 2G50Mnks	AAP	Malaysia	NX.M0RSM.002	E1-431-B812G50Mnks LINPUSAMY1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-431-B81 2G50Mnks	AAP	Malaysia	NX.M0RSM.003	E1-431-B812G50Mnks EM W7HB64EMASMY1 MC UMACks_3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-431-B81 2G50Mnks	AAP	Malaysia	NX.M0RSM.005	E1-431-B812G50Mnks EM W7ST32EMASMY1 MC UMACks_3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-431-B81 2G50Mnks	AAP	Vietnam	NX.M0RSV.003	E1-431-B812G50Mnks LINPUSAVN1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-431-B81 2G50Mnks	PA	ACLA-Spanish	NX.M0RAL.002	E1-431-B812G50Mnks LinpusMGAEA1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_XS41
E1-431-B81 2G50Mnks	PA	ACLA-Spanish	NX.M0RAL.006	E1-431-B812G50Mnks EM W7HB64EMASEA1 MC UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_PT22SP1
E1-431-B81 2G50Mnks	PA	ACLA-Spanish	NX.M0RAL.011	E1-431-B812G50Mnks EM W7ST32EMASEA1 MC UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_PT22SP1

Table 7-1. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-431-B81 2G75Mnks	AAP	Thailand	NX.M0RST.002	E1-431-B812G75Mnks LINPUSATH1 UMACks_3 1*2G/750/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-431-B81 4G32Mnks	AAP	Thailand	NX.M0RST.005	E1-431-B814G32Mnks LINPUSATH1 UMACks_3 1*4G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-431-B81 4G32Mnks	AAP	Vietnam	NX.M0RSV.002	E1-431-B814G32Mnks LINPUSAVN1 UMACks_3 1*4G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11
E1-431-B81 4G50Mnks	AAP	Thailand	NX.M0RST.004	E1-431-B814G50Mnks LINPUSATH1 UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-431-B81 4G50Mnks	PA	ACLA-Spanish	NX.M0RAL.012	E1-431-B814G50Mnks EM W7HB64EMASEA1 MC UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_PT22SP1
E1-431-B96 2G32Mnks	PA	ACLA-Spanish	NX.M0RAL.003	E1-431-B962G32Mnks LinpusMGAEA1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_XS41
E1-431-B96 2G32Mnks	AAP	India	NX.M0RSI.004	E1-431-B962G32Mnks LinpusMGAIN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_XS11
E1-431-B96 2G32Mnks	AAP	India	NX.M0RSI.005	E1-431-B962G32Mnks W7HB64INASIN1 MC UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-431-B96 2G50Mnks	AAP	Thailand	NX.M0RST.006	E1-431-B962G50Mnks LINPUSATH1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-431-B96 2G50Mnks	CHINA	Hong Kong	NX.M0RCF.002	E1-431-B962G50Mnks W7HP64ASHK2 MC UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_ZH31SP1
E1-431-B96 2G50Mnks	AAP	Malaysia	NX.M0RSM.001	E1-431-B962G50Mnks LINPUSAMY1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11

Table 7-1. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-431-B96 2G50Mnks	AAP	Malaysia	NX.M0RSM.004	E1-431-B962G50Mnks EM W7HP64EMASMY1 MC UMACKs_3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-431-B96 2G50Mnks	AAP	Vietnam	NX.M0RSV.004	E1-431-B962G50Mnks LINPUSAVN1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-431-B96 2G50Mnks	AAP	Singapore	NX.M0RSG.001	E1-431-B962G50Mnks LinpusMGASG1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_XS11
E1-431-B96 2G50Mnks	AAP	Singapore	NX.M0RSG.003	E1-431-B962G50Mnks W7HP64ASSG1 MC UMACks_3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ZH31SP1
E1-431-B96 2G50Mnks	PA	ACLA-Spanish	NX.M0RAL.004	E1-431-B962G50Mnks LinpusMGAEA1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_XS41
E1-431-B96 2G50Mnks	PA	ACLA-Spanish	NX.M0RAL.007	E1-431-B962G50Mnks EM W7HB64EMASEA1 MC UMACKs_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_PT22SP1
E1-431-B96 2G50Mnks	AAP	Indonesia	NX.M0RSN.002	E1-431-B962G50Mnks LinpusMGAID1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_ID31
E1-431-B96 2G75Mnks	AAP	Thailand	NX.M0RST.007	E1-431-B962G75Mnks LINPUSATH1 UMACks_3 1*2G/750/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-431-B96 4G50Mnks	CHINA	Hong Kong	NX.M0RCF.001	E1-431-B964G50Mnks W7HP64ASHK2 MC UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_ZH31SP1
E1-431-B96 4G50Mnks	PA	ACLA-Spanish	NX.M0RAL.005	E1-431-B964G50Mnks LinpusMGAEA1 UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_XS41

Table 7-1. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-431-B96 4G50Mnks	PA	ACLA-Spanish	NX.M0RAL.008	E1-431-B964G50Mnks EM W7HB64EMASEA1 MC UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_PT22SP1
E1-431-B96 4G50Mnks	PA	ACLA-Spanish	NX.M0RAL.009	E1-431-B964G50Mnks EM W7HP64EMASEA1 MC UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_PT22SP1
E1-431-B97 2G50Mnks	AAP	Singapore	NX.M0RSG.002	E1-431-B972G50Mnks LinpusMGASG1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_XS11
E1-431-B97 2G50Mnks	AAP	Singapore	NX.M0RSG.004	E1-431-B972G50Mnks W7HP64ASSG1 MC UMACks_3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ZH31SP1

Table 7-2. CPU, LCD

Model	Country	Acer Part No	CPU	LCD
E1-431-B81 2G32Mnks	WW	N9.M0RWW.001	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	India	NX.M0RSI.001	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	Thailand	NX.M0RST.003	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	Vietnam	NX.M0RSV.001	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	India	NX.M0RSI.002	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	Indonesia	NX.M0RSN.001	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	ACLA-Spanish	NX.M0RAL.001	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	ACLA-Spanish	NX.M0RAL.010	CMB815	NLED14WXGAG
E1-431-B81 2G32Mnks	India	NX.M0RSI.003	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	GCTWN	N9.M0RTW.001	CMB815	NLED14WXGAG

Table 7-2. CPU, LCD (Continued)

Model	Country	Acer Part No	CPU	LCD
E1-431-B81 2G50Mnks	WW	N9.M0RWW.002	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	Thailand	NX.M0RST.001	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	Malaysia	NX.M0RSM.002	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	Malaysia	NX.M0RSM.003	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	Malaysia	NX.M0RSM.005	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	Vietnam	NX.M0RSV.003	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	ACLA-Spanish	NX.M0RAL.002	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	ACLA-Spanish	NX.M0RAL.006	CMB815	NLED14WXGAG
E1-431-B81 2G50Mnks	ACLA-Spanish	NX.M0RAL.011	CMB815	NLED14WXGAG
E1-431-B81 2G75Mnks	Thailand	NX.M0RST.002	CMB815	NLED14WXGAG
E1-431-B81 4G32Mnks	Thailand	NX.M0RST.005	CMB815	NLED14WXGAG
E1-431-B81 4G32Mnks	Vietnam	NX.M0RSV.002	CMB815	NLED14WXGAG
E1-431-B81 4G50Mnks	Thailand	NX.M0RST.004	CMB815	NLED14WXGAG
E1-431-B81 4G50Mnks	ACLA-Spanish	NX.M0RAL.012	CMB815	NLED14WXGAG
E1-431-B96 2G32Mnks	ACLA-Spanish	NX.M0RAL.003	PMDB960	NLED14WXGAG
E1-431-B96 2G32Mnks	India	NX.M0RSI.004	PMDB960	NLED14WXGAG
E1-431-B96 2G32Mnks	India	NX.M0RSI.005	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Thailand	NX.M0RST.006	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Hong Kong	NX.M0RCF.002	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Malaysia	NX.M0RSM.001	PMDB960	NLED14WXGAG

Table 7-2. CPU, LCD (Continued)

Model	Country	Acer Part No	CPU	LCD
E1-431-B96 2G50Mnks	Malaysia	NX.M0RSM.004	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Vietnam	NX.M0RSV.004	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Singapore	NX.M0RSG.001	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Singapore	NX.M0RSG.003	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	ACLA-Spanish	NX.M0RAL.004	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	ACLA-Spanish	NX.M0RAL.007	PMDB960	NLED14WXGAG
E1-431-B96 2G50Mnks	Indonesia	NX.M0RSN.002	PMDB960	NLED14WXGAG
E1-431-B96 2G75Mnks	Thailand	NX.M0RST.007	PMDB960	NLED14WXGAG
E1-431-B96 4G50Mnks	Hong Kong	NX.M0RCF.001	PMDB960	NLED14WXGAG
E1-431-B96 4G50Mnks	ACLA-Spanish	NX.M0RAL.005	PMDB960	NLED14WXGAG
E1-431-B96 4G50Mnks	ACLA-Spanish	NX.M0RAL.008	PMDB960	NLED14WXGAG
E1-431-B96 4G50Mnks	ACLA-Spanish	NX.M0RAL.009	PMDB960	NLED14WXGAG
E1-431-B97 2G50Mnks	Singapore	NX.M0RSG.002	PMDB970	NLED14WXGAG
E1-431-B97 2G50Mnks	Singapore	NX.M0RSG.004	PMDB970	NLED14WXGAG

Table 7-3. VGA Chip, VRAM 1

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-431-B812 G32Mnks	WW	N9.M0RWW.001	UMA	N
E1-431-B812 G32Mnks	India	NX.M0RSI.001	UMA	N
E1-431-B812 G32Mnks	Thailand	NX.M0RST.003	UMA	N
E1-431-B812 G32Mnks	Vietnam	NX.M0RSV.001	UMA	N

Table 7-3. VGA Chip, VRAM 1 (Continued)

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-431-B812 G32Mnks	India	NX.M0RSI.002	UMA	N
E1-431-B812 G32Mnks	Indonesia	NX.M0RSN.001	UMA	N
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.001	UMA	N
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.010	UMA	N
E1-431-B812 G32Mnks	India	NX.M0RSI.003	UMA	N
E1-431-B812 G50Mnks	GCTWN	N9.M0RTW.001	UMA	N
E1-431-B812 G50Mnks	WW	N9.M0RWW.002	UMA	N
E1-431-B812 G50Mnks	Thailand	NX.M0RST.001	UMA	N
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.002	UMA	N
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.003	UMA	N
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.005	UMA	N
E1-431-B812 G50Mnks	Vietnam	NX.M0RSV.003	UMA	N
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.002	UMA	N
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.006	UMA	N
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.011	UMA	N
E1-431-B812 G75Mnks	Thailand	NX.M0RST.002	UMA	N
E1-431-B814 G32Mnks	Thailand	NX.M0RST.005	UMA	N
E1-431-B814 G32Mnks	Vietnam	NX.M0RSV.002	UMA	N
E1-431-B814 G50Mnks	Thailand	NX.M0RST.004	UMA	N
E1-431-B814 G50Mnks	ACLA-Spanish	NX.M0RAL.012	UMA	N

Table 7-3. VGA Chip, VRAM 1 (Continued)

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-431-B962 G32Mnks	ACLA-Spanish	NX.M0RAL.003	UMA	N
E1-431-B962 G32Mnks	India	NX.M0RSI.004	UMA	N
E1-431-B962 G32Mnks	India	NX.M0RSI.005	UMA	N
E1-431-B962 G50Mnks	Thailand	NX.M0RST.006	UMA	N
E1-431-B962 G50Mnks	Hong Kong	NX.M0RCF.002	UMA	N
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.001	UMA	N
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.004	UMA	N
E1-431-B962 G50Mnks	Vietnam	NX.M0RSV.004	UMA	N
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.001	UMA	N
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.003	UMA	N
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.004	UMA	N
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.007	UMA	N
E1-431-B962 G50Mnks	Indonesia	NX.M0RSN.002	UMA	N
E1-431-B962 G75Mnks	Thailand	NX.M0RST.007	UMA	N
E1-431-B964 G50Mnks	Hong Kong	NX.M0RCF.001	UMA	N
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.005	UMA	N
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.008	UMA	N
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.009	UMA	N
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.002	UMA	N
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.004	UMA	N

Table 7-4. Memory 1, Memory 2, HDD 1

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-431-B812 G32Mnks	WW	N9.M0RWW.001	SO2GBIII	N	N320GB5.4KS _4K
E1-431-B812 G32Mnks	India	NX.M0RSI.001	SO2GBIII	N	N320GB5.4KS
E1-431-B812 G32Mnks	Thailand	NX.M0RST.003	SO2GBIII	N	N320GB5.4KS
E1-431-B812 G32Mnks	Vietnam	NX.M0RSV.001	SO2GBIII	N	N320GB5.4KS
E1-431-B812 G32Mnks	India	NX.M0RSI.002	SO2GBIII	N	N320GB5.4KS _4K
E1-431-B812 G32Mnks	Indonesia	NX.M0RSN.001	SO2GBIII	N	N320GB5.4KS
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.001	SO2GBIII	N	N320GB5.4KS
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.010	SO2GBIII	N	N320GB5.4KS _4K
E1-431-B812 G32Mnks	India	NX.M0RSI.003	SO2GBIII	N	N320GB5.4KS
E1-431-B812 G50Mnks	GCTWN	N9.M0RTW.001	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	WW	N9.M0RWW.002	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	Thailand	NX.M0RST.001	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.002	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.003	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.005	SO2GBIII	N	N500GB5.4KS _4K
E1-431-B812 G50Mnks	Vietnam	NX.M0RSV.003	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.002	SO2GBIII	N	N500GB5.4KS
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.006	SO2GBIII	N	N500GB5.4KS _4K
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.011	SO2GBIII	N	N500GB5.4KS _4K

Table 7-4. Memory 1, Memory 2, HDD 1 (Continued)

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-431-B812 G75Mnks	Thailand	NX.M0RST.002	SO2GBIII	N	N750GB5.4KS _4K
E1-431-B814 G32Mnks	Thailand	NX.M0RST.005	SO4GBIII	N	N320GB5.4KS
E1-431-B814 G32Mnks	Vietnam	NX.M0RSV.002	SO4GBIII	N	N320GB5.4KS
E1-431-B814 G50Mnks	Thailand	NX.M0RST.004	SO4GBIII	N	N500GB5.4KS
E1-431-B814 G50Mnks	ACLA-Spanish	NX.M0RAL.012	SO4GBIII	N	N500GB5.4KS _4K
E1-431-B962 G32Mnks	ACLA-Spanish	NX.M0RAL.003	SO2GBIII	N	N320GB5.4KS
E1-431-B962 G32Mnks	India	NX.M0RSI.004	SO2GBIII	N	N320GB5.4KS
E1-431-B962 G32Mnks	India	NX.M0RSI.005	SO2GBIII	N	N320GB5.4KS _4K
E1-431-B962 G50Mnks	Thailand	NX.M0RST.006	SO2GBIII	N	N500GB5.4KS
E1-431-B962 G50Mnks	Hong Kong	NX.M0RCF.002	SO2GBIII	N	N500GB5.4KS _4K
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.001	SO2GBIII	N	N500GB5.4KS
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.004	SO2GBIII	N	N500GB5.4KS _4K
E1-431-B962 G50Mnks	Vietnam	NX.M0RSV.004	SO2GBIII	N	N500GB5.4KS
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.001	SO2GBIII	N	N500GB5.4KS
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.003	SO2GBIII	N	N500GB5.4KS _4K
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.004	SO2GBIII	N	N500GB5.4KS
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.007	SO2GBIII	N	N500GB5.4KS _4K
E1-431-B962 G50Mnks	Indonesia	NX.M0RSN.002	SO2GBIII	N	N500GB5.4KS
E1-431-B962 G75Mnks	Thailand	NX.M0RST.007	SO2GBIII	N	N750GB5.4KS _4K
E1-431-B964 G50Mnks	Hong Kong	NX.M0RCF.001	SO4GBIII	N	N500GB5.4KS _4K

Table 7-4. Memory 1, Memory 2, HDD 1 (Continued)

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.005	SO4GBIII	N	N500GB5.4KS
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.008	SO4GBIII	N	N500GB5.4KS _4K
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.009	SO4GBIII	N	N500GB5.4KS _4K
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.002	SO2GBIII	N	N500GB5.4KS
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.004	SO2GBIII	N	N500GB5.4KS _4K

Table 7-5. ODD, Extra SW1, Card Reader

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-431-B812 G32Mnks	WW	N9.M0RWW.001	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G32Mnks	India	NX.M0RSI.001	NSM8XS	N	5 in 1-Build in
E1-431-B812 G32Mnks	Thailand	NX.M0RST.003	NSM8XS	N	5 in 1-Build in
E1-431-B812 G32Mnks	Vietnam	NX.M0RSV.001	NSM8XS	N	5 in 1-Build in
E1-431-B812 G32Mnks	India	NX.M0RSI.002	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G32Mnks	Indonesia	NX.M0RSN.001	NSM8XS	N	5 in 1-Build in
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.001	NSM8XS	N	5 in 1-Build in
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.010	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G32Mnks	India	NX.M0RSI.003	NSM8XS	N	5 in 1-Build in
E1-431-B812 G50Mnks	GCTWN	N9.M0RTW.001	NSM8XS	N	5 in 1-Build in
E1-431-B812 G50Mnks	WW	N9.M0RWW.002	NSM8XS	N	5 in 1-Build in
E1-431-B812 G50Mnks	Thailand	NX.M0RST.001	NSM8XS	N	5 in 1-Build in
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.002	NSM8XS	N	5 in 1-Build in

Table 7-5. ODD, Extra SW1, Card Reader (Continued)

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.003	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.005	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G50Mnks	Vietnam	NX.M0RSV.003	NSM8XS	N	5 in 1-Build in
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.002	NSM8XS	N	5 in 1-Build in
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.006	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.011	NSM8XS	McAfee	5 in 1-Build in
E1-431-B812 G75Mnks	Thailand	NX.M0RST.002	NSM8XS	N	5 in 1-Build in
E1-431-B814 G32Mnks	Thailand	NX.M0RST.005	NSM8XS	N	5 in 1-Build in
E1-431-B814 G32Mnks	Vietnam	NX.M0RSV.002	NSM8XS	N	5 in 1-Build in
E1-431-B814 G50Mnks	Thailand	NX.M0RST.004	NSM8XS	N	5 in 1-Build in
E1-431-B814 G50Mnks	ACLA-Spanish	NX.M0RAL.012	NSM8XS	McAfee	5 in 1-Build in
E1-431-B962 G32Mnks	ACLA-Spanish	NX.M0RAL.003	NSM8XS	N	5 in 1-Build in
E1-431-B962 G32Mnks	India	NX.M0RSI.004	NSM8XS	N	5 in 1-Build in
E1-431-B962 G32Mnks	India	NX.M0RSI.005	NSM8XS	McAfee	5 in 1-Build in
E1-431-B962 G50Mnks	Thailand	NX.M0RST.006	NSM8XS	N	5 in 1-Build in
E1-431-B962 G50Mnks	Hong Kong	NX.M0RCF.002	NSM8XS	McAfee	5 in 1-Build in
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.001	NSM8XS	N	5 in 1-Build in
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.004	NSM8XS	McAfee	5 in 1-Build in
E1-431-B962 G50Mnks	Vietnam	NX.M0RSV.004	NSM8XS	N	5 in 1-Build in
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.001	NSM8XS	N	5 in 1-Build in

Table 7-5. ODD, Extra SW1, Card Reader (Continued)

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.003	NSM8XS	McAfee	5 in 1-Build in
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.004	NSM8XS	N	5 in 1-Build in
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.007	NSM8XS	McAfee	5 in 1-Build in
E1-431-B962 G50Mnks	Indonesia	NX.M0RSN.002	NSM8XS	N	5 in 1-Build in
E1-431-B962 G75Mnks	Thailand	NX.M0RST.007	NSM8XS	N	5 in 1-Build in
E1-431-B964 G50Mnks	Hong Kong	NX.M0RCF.001	NSM8XS	McAfee	5 in 1-Build in
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.005	NSM8XS	N	5 in 1-Build in
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.008	NSM8XS	McAfee	5 in 1-Build in
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.009	NSM8XS	McAfee	5 in 1-Build in
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.002	NSM8XS	N	5 in 1-Build in
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.004	NSM8XS	McAfee	5 in 1-Build in

Table 7-6. Wireless LAN1, Bluetooth, NB Chipset

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-431-B812 G32Mnks	WW	N9.M0RW.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	India	NX.M0RSI.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	Thailand	NX.M0RST.003	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	Vietnam	NX.M0RSV.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	India	NX.M0RSI.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	Indonesia	NX.M0RSN.001	3rd WiFi 1x1 BGN	N	HM77

Table 7-6. Wireless LAN1, Bluetooth, NB Chipset (Continued)

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.010	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G32Mnks	India	NX.M0RSI.003	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	GCTWN	N9.M0RTW.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	WW	N9.M0RWW.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	Thailand	NX.M0RST.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.003	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.005	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	Vietnam	NX.M0RSV.003	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.006	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.011	3rd WiFi 1x1 BGN	N	HM77
E1-431-B812 G75Mnks	Thailand	NX.M0RST.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B814 G32Mnks	Thailand	NX.M0RST.005	3rd WiFi 1x1 BGN	N	HM77
E1-431-B814 G32Mnks	Vietnam	NX.M0RSV.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B814 G50Mnks	Thailand	NX.M0RST.004	3rd WiFi 1x1 BGN	N	HM77
E1-431-B814 G50Mnks	ACLA-Spanish	NX.M0RAL.012	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G32Mnks	ACLA-Spanish	NX.M0RAL.003	3rd WiFi 1x1 BGN	N	HM77

Table 7-6. Wireless LAN1, Bluetooth, NB Chipset (Continued)

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-431-B962 G32Mnks	India	NX.M0RSI.004	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G32Mnks	India	NX.M0RSI.005	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Thailand	NX.M0RST.006	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Hong Kong	NX.M0RCF.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.004	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Vietnam	NX.M0RSV.004	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.003	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.004	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.007	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G50Mnks	Indonesia	NX.M0RSN.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B962 G75Mnks	Thailand	NX.M0RST.007	3rd WiFi 1x1 BGN	N	HM77
E1-431-B964 G50Mnks	Hong Kong	NX.M0RCF.001	3rd WiFi 1x1 BGN	N	HM77
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.005	3rd WiFi 1x1 BGN	N	HM77
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.008	3rd WiFi 1x1 BGN	N	HM77
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.009	3rd WiFi 1x1 BGN	N	HM77
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.002	3rd WiFi 1x1 BGN	N	HM77
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.004	3rd WiFi 1x1 BGN	N	HM77

Table 7-7. Battery, Adapter, Camera

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-431-B812 G32Mnks	WW	N9.M0RWW.001	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	India	NX.M0RSI.001	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	Thailand	NX.M0RST.003	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	Vietnam	NX.M0RSV.001	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	India	NX.M0RSI.002	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	Indonesia	NX.M0RSN.001	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.001	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	ACLA-Spanish	NX.M0RAL.010	6CELL2.2	65W	HD
E1-431-B812 G32Mnks	India	NX.M0RSI.003	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	GCTWN	N9.M0RTW.001	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	WW	N9.M0RWW.002	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	Thailand	NX.M0RST.001	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.002	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.003	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	Malaysia	NX.M0RSM.005	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	Vietnam	NX.M0RSV.003	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.002	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.006	6CELL2.2	65W	HD
E1-431-B812 G50Mnks	ACLA-Spanish	NX.M0RAL.011	6CELL2.2	65W	HD

Table 7-7. Battery, Adapter, Camera (Continued)

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-431-B812 G75Mnks	Thailand	NX.M0RST.002	6CELL2.2	65W	HD
E1-431-B814 G32Mnks	Thailand	NX.M0RST.005	6CELL2.2	65W	HD
E1-431-B814 G32Mnks	Vietnam	NX.M0RSV.002	6CELL2.2	65W	HD
E1-431-B814 G50Mnks	Thailand	NX.M0RST.004	6CELL2.2	65W	HD
E1-431-B814 G50Mnks	ACLA-Spanish	NX.M0RAL.012	6CELL2.2	65W	HD
E1-431-B962 G32Mnks	ACLA-Spanish	NX.M0RAL.003	6CELL2.2	65W	HD
E1-431-B962 G32Mnks	India	NX.M0RSI.004	6CELL2.2	65W	HD
E1-431-B962 G32Mnks	India	NX.M0RSI.005	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Thailand	NX.M0RST.006	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Hong Kong	NX.M0RCF.002	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.001	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Malaysia	NX.M0RSM.004	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Vietnam	NX.M0RSV.004	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.001	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Singapore	NX.M0RSG.003	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.004	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	ACLA-Spanish	NX.M0RAL.007	6CELL2.2	65W	HD
E1-431-B962 G50Mnks	Indonesia	NX.M0RSN.002	6CELL2.2	65W	HD
E1-431-B962 G75Mnks	Thailand	NX.M0RST.007	6CELL2.2	65W	HD
E1-431-B964 G50Mnks	Hong Kong	NX.M0RCF.001	6CELL2.2	65W	HD

Table 7-7. Battery, Adapter, Camera (Continued)

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.005	6CELL2.2	65W	HD
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.008	6CELL2.2	65W	HD
E1-431-B964 G50Mnks	ACLA-Spanish	NX.M0RAL.009	6CELL2.2	65W	HD
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.002	6CELL2.2	65W	HD
E1-431-B972 G50Mnks	Singapore	NX.M0RSG.004	6CELL2.2	65W	HD

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Table 7-8. RO, Description

Model	RO	Country	Acer Part No	Description
E1-431G-B96 2G32Mnks	AAP	India	NX.M16SI.001	E1-431G-B962G32Mnks LINPUSA1N1 N13MGS1GBCks_3V3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11
E1-431G-B96 2G32Mnks	AAP	India	NX.M16SI.002	E1-431G-B962G32Mnks W7HB64INASIN1 MC N13MGS1GBCks_3V3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-431G-B96 2G32Mnks	AAP	Indonesia	NX.M16SN.001	E1-431G-B962G32Mnks LINPUSAID1 N13MGS1GBCks_3V3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_ID22
E1-431G-B96 2G50Mnks	WWW	GCTWN	N9.M16TW.001	E1-431G-B962G50Mnks W7HP64AWW1 MC N13MGS1GBCks_3V3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_ES61SP1
E1-431G-B96 2G50Mnks	TWN	GCTWN	NX.M16TA.001	E1-431G-B962G50Mnks W7HP64ASTW1 MC N13MGS1GBCks_3V3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_TC41SP1
E1-431G-B96 4G50Mnks	CHINA	Hong Kong	NX.M16CF.001	E1-431G-B964G50Mnks W7HP64ASHK2 MC N13MGS1GBCks_3V3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_ZH31SP1

Table 7-9. CPU, LCD

Model	Country	Acer Part No	CPU	LCD
E1-431G-B96 2G32Mnks	India	NX.M16SI.001	PMDB960	NLED14WXGAG
E1-431G-B96 2G32Mnks	India	NX.M16SI.002	PMDB960	NLED14WXGAG
E1-431G-B96 2G32Mnks	Indonesia	NX.M16SN.001	PMDB960	NLED14WXGAG

Table 7-9. CPU, LCD (Continued)

Model	Country	Acer Part No	CPU	LCD
E1-431G-B96 2G50Mnks	GCTWN	N9.M16TW.001	PMDB960	NLED14WXGAG
E1-431G-B96 2G50Mnks	GCTWN	NX.M16TA.001	PMDB960	NLED14WXGAG
E1-431G-B96 4G50Mnks	Hong Kong	NX.M16CF.001	PMDB960	NLED14WXGAG

Table 7-10. VGA Chip, VRAM 1

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-431G-B96 2G32Mnks	India	NX.M16SI.001	N13MGS	1G-DDR3 (128*16*4)
E1-431G-B96 2G32Mnks	India	NX.M16SI.002	N13MGS	1G-DDR3 (128*16*4)
E1-431G-B96 2G32Mnks	Indonesia	NX.M16SN.001	N13MGS	1G-DDR3 (128*16*4)
E1-431G-B96 2G50Mnks	GCTWN	N9.M16TW.001	N13MGS	1G-DDR3 (128*16*4)
E1-431G-B96 2G50Mnks	GCTWN	NX.M16TA.001	N13MGS	1G-DDR3 (128*16*4)
E1-431G-B96 4G50Mnks	Hong Kong	NX.M16CF.001	N13MGS	1G-DDR3 (128*16*4)

Table 7-11. Memory 1, Memory 2, HDD 1

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-431G-B96 2G32Mnks	India	NX.M16SI.001	SO2GBIII	N	N320GB5.4KS
E1-431G-B96 2G32Mnks	India	NX.M16SI.002	SO2GBIII	N	N320GB5.4KS_4K
E1-431G-B96 2G32Mnks	Indonesia	NX.M16SN.001	SO2GBIII	N	N320GB5.4KS
E1-431G-B96 2G50Mnks	GCTWN	N9.M16TW.001	SO2GBIII	N	N500GB5.4KS
E1-431G-B96 2G50Mnks	GCTWN	NX.M16TA.001	SO2GBIII	N	N500GB5.4KS_4K
E1-431G-B96 4G50Mnks	Hong Kong	NX.M16CF.001	SO4GBIII	N	N500GB5.4KS_4K

Table 7-12. ODD, Extra SW1, Card Reader

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-431G-B96 2G32Mnks	India	NX.M16SI.001	NSM8XS	N	5 in 1-Build in
E1-431G-B96 2G32Mnks	India	NX.M16SI.002	NSM8XS	McAfee	5 in 1-Build in
E1-431G-B96 2G32Mnks	Indonesia	NX.M16SN.001	NSM8XS	N	5 in 1-Build in
E1-431G-B96 2G50Mnks	GCTWN	N9.M16TW.001	NSM8XS	McAfee	5 in 1-Build in
E1-431G-B96 2G50Mnks	GCTWN	NX.M16TA.001	NSM8XS	McAfee	5 in 1-Build in
E1-431G-B96 4G50Mnks	Hong Kong	NX.M16CF.001	NSM8XS	McAfee	5 in 1-Build in

Table 7-13. Wireless LAN1, Bluetooth, NB Chipset

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-431G-B96 2G32Mnks	India	NX.M16SI.001	3rd WiFi 1x1 BGN	N	HM77
E1-431G-B96 2G32Mnks	India	NX.M16SI.002	3rd WiFi 1x1 BGN	N	HM77
E1-431G-B96 2G32Mnks	Indonesia	NX.M16SN.001	3rd WiFi 1x1 BGN	N	HM77
E1-431G-B96 2G50Mnks	GCTWN	N9.M16TW.001	3rd WiFi 1x1 BGN	N	HM77
E1-431G-B96 2G50Mnks	GCTWN	NX.M16TA.001	3rd WiFi 1x1 BGN	N	HM77
E1-431G-B96 4G50Mnks	Hong Kong	NX.M16CF.001	3rd WiFi 1x1 BGN	N	HM77

Table 7-14. Battery, Adapter, Camera

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-431G-B96 2G32Mnks	India	NX.M16SI.001	6CELL2.2	90W	HD
E1-431G-B96 2G32Mnks	India	NX.M16SI.002	6CELL2.2	90W	HD
E1-431G-B96 2G32Mnks	Indonesia	NX.M16SN.001	6CELL2.2	90W	HD

Table 7-14. Battery, Adapter, Camera (Continued)

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-431G-B96 2G50Mnks	GCTWN	N9.M16TW.001	6CELL2.2	90W	HD
E1-431G-B96 2G50Mnks	GCTWN	NX.M16TA.001	6CELL2.2	90W	HD
E1-431G-B96 4G50Mnks	Hong Kong	NX.M16CF.001	6CELL2.2	90W	HD

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Table 7-15. RO, Description

Model	RO	Country	Acer Part No	Description
E1-471-32352G 32Mnks	AAP	India	NX.M0QSI.001	E1-471-32352G32Mnks LINPUSAIN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1. 3M HD_Rk_EN11
E1-471-32352G 32Mnks	AAP	Vietnam	NX.M0QSV.002	E1-471-32352G32Mnks LINPUSAVN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1. 3M HD_Rk_EN11
E1-471-32352G 50Mnks	AAP	Thailand	NX.M0QST.001	E1-471-32352G50Mnks LINPUSATH1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51
E1-471-32352G 50Mnks	AAP	Vietnam	NX.M0QSV.003	E1-471-32352G50Mnks LINPUSAVN1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11
E1-471-32352G 50Mnks	AAP	Indonesia	NX.M0QSN.001	E1-471-32352G50Mnks LINPUSAID1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_ID22
E1-471-32352G 50Mnks	AAP	Malaysia	NX.M0QSM.001	E1-471-32352G50Mnks LINPUSAMY1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_EN11
E1-471-32352G 50Mnks	AAP	Malaysia	NX.M0QSM.002	E1-471-32352G50Mnks EM W7HP64EMASMY1 MC UMACks_3 1*2G/500/6L2.2/5R/CB_GN_1. 3M HD_Rk_ES61SP1
E1-471-32352G 50Mnks	CHINA	China	NX.M0QCN.001	E1-471-32352G50Mnks W7HB64SCASCN1 MC UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_SC11SP1
E1-471-32352G 50Mnks	CHINA	China	NX.M0QCN.002	E1-471-32352G50Mnks LinpusMGACN1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1.3M HD_Rk_ZH41
E1-471-32352G 75Mnks	AAP	Thailand	NX.M0QST.002	E1-471-32352G75Mnks LINPUSATH1 UMACks_3 1*2G/750/6L2.2/5R/CB_GN_1. 3M HD_Rk_TH51

Table 7-15. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-471-32354G 50Mnks	CHINA	Hong Kong	NX.M0QCF.001	E1-471-32354G50Mnks W7HP64ASHK2 MC UMACKs_3 1*4G/500/6L2.2/5R/CB_GN_1. 3M HD_Rk_ZH31SP1
E1-471-32354G 50Mnks	CHINA	Hong Kong	NX.M0QCF.003	E1-471-32354G50Mnks W7HP64ASHK2 MC UMACKs_3 1*4G/500_L/6L2.2/5R/CB_GN_1. 3M HD_Rk_ZH31SP1
E1-471-32354G 50Mnks	CHINA	China	NX.M0QCN.003	E1-471-32354G50Mnks LinpusMGACN1 UMACks_3 1*4G/500_L/6L2.2/5R/CB_GN_1. 3M HD_Rk_ZH41
E1-471-32356G 75Mnks	WW	WW	N9.M0QWW.001	E1-471-32356G75Mnks W7HP64AWW1 MC UMACKs_3 2G+4G/750/6L2.2/5R/CB_GN_1. 3M HD_Rk_ES62SP1
E1-471-32372G 50Mnks	TWN	GCTWN	NX.M0QTA.001	E1-471-32372G50Mnks W7HP64ASTW1 MC UMACKs_3 1*2G/500/6L2.2/5R/CB_GN_1. 3M HD_Rk_TC41SP1
E1-471-B962G 32Mnks	AAP	Vietnam	NX.M0QSV.001	E1-471-B962G32Mnks LINPUSAVN1 UMACks_3 1*2G/320/6L2.2/5R/CB_GN_1. 3M HD_Rk_EN11
E1-471-B962G 50Mnks	AAP	Thailand	NX.M0QST.004	E1-471-B962G50Mnks LINPUSATH1 UMACks_3 1*2G/500_L/6L2.2/5R/CB_GN_1. 3M HD_Rk_TH51
E1-471-B962G 75Mnks	AAP	Thailand	NX.M0QST.003	E1-471-B962G75Mnks LINPUSATH1 UMACks_3 1*2G/750/6L2.2/5R/CB_GN_1. 3M HD_Rk_TH51
E1-471-B964G 50Mnks	CHINA	Hong Kong	NX.M0QCF.002	E1-471-B964G50Mnks W7HP64ASHK2 MC UMACKs_3 1*4G/500/6L2.2/5R/CB_GN_1. 3M HD_Rk_ZH31SP1

Table 7-16. CPU, LCD

Model	Country	Acer Part No	CPU	LCD
E1-471-32352 G32Mnks	India	NX.M0QSI.001	Ci32350M	NLED14WXGAG
E1-471-32352 G32Mnks	Vietnam	NX.M0QSV.002	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	Thailand	NX.M0QST.001	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	Vietnam	NX.M0QSV.003	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	Indonesia	NX.M0QSN.001	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.001	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.002	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	China	NX.M0QCN.001	Ci32350M	NLED14WXGAG
E1-471-32352 G50Mnks	China	NX.M0QCN.002	Ci32350M	NLED14WXGAG
E1-471-32352 G75Mnks	Thailand	NX.M0QST.002	Ci32350M	NLED14WXGAG
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.001	Ci32350M	NLED14WXGAG
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.003	Ci32350M	NLED14WXGAG
E1-471-32354 G50Mnks	China	NX.M0QCN.003	Ci32350M	NLED14WXGAG
E1-471-32356 G75Mnks	WW	N9.M0QWW.001	Ci32350M	NLED14WXGAG
E1-471-32372 G50Mnks	GCTWN	NX.M0QTA.001	Ci32370M	NLED14WXGAG
E1-471-B962 G32Mnks	Vietnam	NX.M0QSV.001	PMDB960	NLED14WXGAG
E1-471-B962 G50Mnks	Thailand	NX.M0QST.004	PMDB960	NLED14WXGAG
E1-471-B962 G75Mnks	Thailand	NX.M0QST.003	PMDB960	NLED14WXGAG
E1-471-B964 G50Mnks	Hong Kong	NX.M0QCF.002	PMDB960	NLED14WXGAG

Table 7-17. VGA Chip, VRAM 1

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-471-32352 G32Mnks	India	NX.M0QSI.001	UMA	N
E1-471-32352 G32Mnks	Vietnam	NX.M0QSV.002	UMA	N
E1-471-32352 G50Mnks	Thailand	NX.M0QST.001	UMA	N
E1-471-32352 G50Mnks	Vietnam	NX.M0QSV.003	UMA	N
E1-471-32352 G50Mnks	Indonesia	NX.M0QSN.001	UMA	N
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.001	UMA	N
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.002	UMA	N
E1-471-32352 G50Mnks	China	NX.M0QCN.001	UMA	N
E1-471-32352 G50Mnks	China	NX.M0QCN.002	UMA	N
E1-471-32352 G75Mnks	Thailand	NX.M0QST.002	UMA	N
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.001	UMA	N
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.003	UMA	N
E1-471-32354 G50Mnks	China	NX.M0QCN.003	UMA	N
E1-471-32356 G75Mnks	WW	N9.M0QWW.001	UMA	N
E1-471-32372 G50Mnks	GCTWN	NX.M0QTA.001	UMA	N
E1-471-B962 G32Mnks	Vietnam	NX.M0QSV.001	UMA	N
E1-471-B962 G50Mnks	Thailand	NX.M0QST.004	UMA	N
E1-471-B962 G75Mnks	Thailand	NX.M0QST.003	UMA	N
E1-471-B964 G50Mnks	Hong Kong	NX.M0QCF.002	UMA	N

Table 7-18. Memory 1, Memory 2, HDD 1

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-471-3235 2G32Mnks	India	NX.M0QSI.001	SO2GBIII		N320GB5.4KS
E1-471-3235 2G32Mnks	Vietnam	NX.M0QSV.002	SO2GBIII		N320GB5.4KS
E1-471-3235 2G50Mnks	Thailand	NX.M0QST.001	SO2GBIII		N500GB5.4KS
E1-471-3235 2G50Mnks	Vietnam	NX.M0QSV.003	SO2GBIII		N500GB5.4KS
E1-471-3235 2G50Mnks	Indonesia	NX.M0QSN.001	SO2GBIII		N500GB5.4KS
E1-471-3235 2G50Mnks	Malaysia	NX.M0QSM.001	SO2GBIII		N500GB5.4KS
E1-471-3235 2G50Mnks	Malaysia	NX.M0QSM.002	SO2GBIII		N500GB5.4KS_4K
E1-471-3235 2G50Mnks	China	NX.M0QCN.001	SO2GBIII		N500GB5.4KS_4K
E1-471-3235 2G50Mnks	China	NX.M0QCN.002	SO2GBIII		N500GB5.4KS
E1-471-3235 2G75Mnks	Thailand	NX.M0QST.002	SO2GBIII		N750GB5.4KS_4K
E1-471-3235 4G50Mnks	Hong Kong	NX.M0QCF.001	SO4GBIII		N500GB5.4KS_4K
E1-471-3235 4G50Mnks	Hong Kong	NX.M0QCF.003	SO4GBIII		N500GB5.4KS_4K
E1-471-3235 4G50Mnks	China	NX.M0QCN.003	SO4GBIII		N500GB5.4KS
E1-471-3235 6G75Mnks	WW	N9.M0QWW.001	SO2GBIII	SO4GBIII	N750GB5.4KS_4K
E1-471-3237 2G50Mnks	GCTWN	NX.M0QTA.001	SO2GBIII		N500GB5.4KS_4K
E1-471-B962 G32Mnks	Vietnam	NX.M0QSV.001	SO2GBIII		N320GB5.4KS
E1-471-B962 G50Mnks	Thailand	NX.M0QST.004	SO2GBIII		N500GB5.4KS
E1-471-B962 G75Mnks	Thailand	NX.M0QST.003	SO2GBIII		N750GB5.4KS_4K
E1-471-B964 G50Mnks	Hong Kong	NX.M0QCF.002	SO4GBIII		N500GB5.4KS_4K

Table 7-19. ODD, Extra SW1, Card Reader

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-471-32352 G32Mnks	India	NX.M0QSI.001	NSM8XS	N	5 in 1-Build in
E1-471-32352 G32Mnks	Vietnam	NX.M0QSV.002	NSM8XS	N	5 in 1-Build in
E1-471-32352 G50Mnks	Thailand	NX.M0QST.001	NSM8XS	N	5 in 1-Build in
E1-471-32352 G50Mnks	Vietnam	NX.M0QSV.003	NSM8XS	N	5 in 1-Build in
E1-471-32352 G50Mnks	Indonesia	NX.M0QSN.001	NSM8XS	N	5 in 1-Build in
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.001	NSM8XS	N	5 in 1-Build in
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.002	NSM8XS	McAfee	5 in 1-Build in
E1-471-32352 G50Mnks	China	NX.M0QCN.001	NSM8XS	McAfee	5 in 1-Build in
E1-471-32352 G50Mnks	China	NX.M0QCN.002	NSM8XS	N	5 in 1-Build in
E1-471-32352 G75Mnks	Thailand	NX.M0QST.002	NSM8XS	N	5 in 1-Build in
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.001	NSM8XS	McAfee	5 in 1-Build in
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.003	NSM8XS	McAfee	5 in 1-Build in
E1-471-32354 G50Mnks	China	NX.M0QCN.003	NSM8XS	N	5 in 1-Build in
E1-471-32356 G75Mnks	WW	N9.M0QWW.001	NSM8XS	McAfee	5 in 1-Build in
E1-471-32372 G50Mnks	GCTWN	NX.M0QTA.001	NSM8XS	McAfee	5 in 1-Build in
E1-471-B962 G32Mnks	Vietnam	NX.M0QSV.001	NSM8XS	N	5 in 1-Build in
E1-471-B962 G50Mnks	Thailand	NX.M0QST.004	NSM8XS	N	5 in 1-Build in
E1-471-B962 G75Mnks	Thailand	NX.M0QST.003	NSM8XS	N	5 in 1-Build in
E1-471-B964 G50Mnks	Hong Kong	NX.M0QCF.002	NSM8XS	McAfee	5 in 1-Build in

Table 7-20. Wireless LAN1, Bluetooth, NB Chipset

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-471-32352 G32Mnks	India	NX.M0QSI.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G32Mnks	Vietnam	NX.M0QSV.002	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	Thailand	NX.M0QST.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	Vietnam	NX.M0QSV.003	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	Indonesia	NX.M0QSN.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.002	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	China	NX.M0QCN.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G50Mnks	China	NX.M0QCN.002	3rd WiFi 1x1 BGN	N	HM77
E1-471-32352 G75Mnks	Thailand	NX.M0QST.002	3rd WiFi 1x1 BGN	N	HM77
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.003	3rd WiFi 1x1 BGN	N	HM77
E1-471-32354 G50Mnks	China	NX.M0QCN.003	3rd WiFi 1x1 BGN	N	HM77
E1-471-32356 G75Mnks	WW	N9.M0QWW.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-32372 G50Mnks	GCTWN	NX.M0QTA.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-B962 G32Mnks	Vietnam	NX.M0QSV.001	3rd WiFi 1x1 BGN	N	HM77
E1-471-B962 G50Mnks	Thailand	NX.M0QST.004	3rd WiFi 1x1 BGN	N	HM77
E1-471-B962 G75Mnks	Thailand	NX.M0QST.003	3rd WiFi 1x1 BGN	N	HM77
E1-471-B964 G50Mnks	Hong Kong	NX.M0QCF.002	3rd WiFi 1x1 BGN	N	HM77

Table 7-21. Battery, Adapter, Camera

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-471-32352 G32Mnks	India	NX.M0QSI.001	6CELL2.2	65W	HD
E1-471-32352 G32Mnks	Vietnam	NX.M0QSV.002	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	Thailand	NX.M0QST.001	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	Vietnam	NX.M0QSV.003	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	Indonesia	NX.M0QSN.001	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.001	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	Malaysia	NX.M0QSM.002	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	China	NX.M0QCN.001	6CELL2.2	65W	HD
E1-471-32352 G50Mnks	China	NX.M0QCN.002	6CELL2.2	65W	HD
E1-471-32352 G75Mnks	Thailand	NX.M0QST.002	6CELL2.2	65W	HD
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.001	6CELL2.2	65W	HD
E1-471-32354 G50Mnks	Hong Kong	NX.M0QCF.003	6CELL2.2	65W	HD
E1-471-32354 G50Mnks	China	NX.M0QCN.003	6CELL2.2	65W	HD
E1-471-32356 G75Mnks	WW	N9.M0QWW.001	6CELL2.2	65W	HD
E1-471-32372 G50Mnks	GCTWN	NX.M0QTA.001	6CELL2.2	65W	HD
E1-471-B962 G32Mnks	Vietnam	NX.M0QSV.001	6CELL2.2	65W	HD
E1-471-B962 G50Mnks	Thailand	NX.M0QST.004	6CELL2.2	65W	HD
E1-471-B962 G75Mnks	Thailand	NX.M0QST.003	6CELL2.2	65W	HD
E1-471-B964 G50Mnks	Hong Kong	NX.M0QCF.002	6CELL2.2	65W	HD

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Table 7-22. RO, Description

Model	RO	Country	Acer Part No	Description
E1-471G-323 52G32Mnks	CHINA	China	NX.M0TCN.001	E1-471G-32352G32Mnks LINPUSACN1 N13MGS1GBCks_3V3 1*2G/320/6L2.2/5R/CB_GN_1.3M HD_Rk_EN91
E1-471G-323 52G50Mnks	AAP	Vietnam	NX.M0TSV.001	E1-471G-32352G50Mnks LINPUSAVN1 N13MGS1GBCks_3V3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-471G-323 52G50Mnks	CHINA	China	NX.M0TCN.002	E1-471G-32352G50Mnks LINPUSACN1 N13MGS1GBCks_3V3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN91
E1-471G-323 52G50Mnks	CHINA	China	NX.M0TCN.003	E1-471G-32352G50Mnks W7HB64SCASCN1 MC N13MGS1GBCks_3V3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_SC11SP1
E1-471G-323 54G50Mnks	CHINA	Hong Kong	NX.M0TCF.001	E1-471G-32354G50Mnks W7HP64ASHK2 MC N13MGS1GBCks_3V3 1*4G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ZH31SP1
E1-471G-323 54G50Mnks	CHINA	Hong Kong	NX.M0TCF.003	E1-471G-32354G50Mnks W7HP64ASHK2 MC N13MGS1GBCks_3V3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_ZH31SP1
E1-471G-323 54G50Mnks	CHINA	China	NX.M0TCN.004	E1-471G-32354G50Mnks W7HB64SCASCN1 MC N13MGS1GBCks_3V3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_SC11SP1
E1-471G-323 72G50Mnks	TWN	GCTWN	NX.M0TTA.001	E1-471G-32372G50Mnks W7HP64ASTW1 MC N13MGS1GBCks_3V3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_TC41SP1

Table 7-22. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-471G-331 16G50Mnks	WW	WW	N9.M0TWW.002	E1-471G-33116G50Mnks W7HP64ASWW1 MC N13MGS1GBCks_3V3 2G+4G/500/6L2.2/5R/CB_GN_1.3 M HD_Rk_ES62SP1
E1-471G-524 52G50Mnks	CHINA	China	NX.M1SCN.002	E1-471G-52452G50Mnks W7HB64SCASCN1 MC N13PGL1GBCks_3V3U 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_SC11SP1
E1-471G-524 54G50Mnks	WW	WW	N9.M1SWW.001	E1-471G-52454G50Mnks LINPUSAWW1 N13PGL1GBCks_3V3 2*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-471G-524 54G50Mnks	CHINA	China	NX.M1SCN.001	E1-471G-52454G50Mnks W7HB64SCASCN1 MC N13PGL1GBCks_3V3U 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_SC11SP1
E1-471G-B96 2G50Mnks	AAP	India	NX.M0TSI.001	E1-471G-B962G50Mnks LINPUSAIN1 N13MGS1GBCks_3V3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_EN11
E1-471G-B96 2G50Mnks	AAP	India	NX.M0TSI.002	E1-471G-B962G50Mnks W7HB64INASIN1 MC N13MGS1GBCks_3V3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ES61SP1
E1-471G-B96 2G50Mnks	AAP	Thailand	NX.M0TST.001	E1-471G-B962G50Mnks LINPUSATH1 N13MGS1GBCks_3V3 1*2G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_TH51
E1-471G-B96 2G50Mnks	TWN	GCTWN	NX.M0TTA.002	E1-471G-B962G50Mnks W7HP64ASTW1 MC N13MGS1GBCks_3V3 1*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_TC41SP1
E1-471G-B96 2G75Mnks	AAP	Thailand	NX.M0TST.002	E1-471G-B962G75Mnks LINPUSATH1 N13MGS1GBCks_3V3 1*2G/750/6L2.2/5R/CB_GN_1.3M HD_Rk_TH51

Table 7-22. RO, Description (Continued)

Model	RO	Country	Acer Part No	Description
E1-471G-B96 4G50Mnks	AAP	Thailand	NX.M0TST.003	E1-471G-B964G50Mnks Linpusath1 N13MGS1GBCks_3V3 1*4G/500_L/6L2.2/5R/CB_GN_1.3 M HD_Rk_TH51
E1-471G-B96 4G50Mnks	CHINA	Hong Kong	NX.M0TCF.002	E1-471G-B964G50Mnks W7HP64ASHK2 MC N13MGS1GBCks_3V3 1*4G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ZH31SP1
E1-471G-B97 4G50Mnks	WW	WW	N9.M0TWW.001	E1-471G-B974G50Mnks W7HP64ASWW1 MC N13MGS1GBCks_3V3 2*2G/500/6L2.2/5R/CB_GN_1.3M HD_Rk_ES62SP1

Table 7-23. CPU, LCD

Model	Country	Acer Part No	CPU	LCD
E1-471G-323 52G32Mnks	China	NX.M0TCN.001	Ci32350M	NLED14WXGAG
E1-471G-323 52G50Mnks	Vietnam	NX.M0TSV.001	Ci32350M	NLED14WXGAG
E1-471G-323 52G50Mnks	China	NX.M0TCN.002	Ci32350M	NLED14WXGAG
E1-471G-323 52G50Mnks	China	NX.M0TCN.003	Ci32350M	NLED14WXGAG
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.001	Ci32350M	NLED14WXGAG
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.003	Ci32350M	NLED14WXGAG
E1-471G-323 54G50Mnks	China	NX.M0TCN.004	Ci32350M	NLED14WXGAG
E1-471G-323 72G50Mnks	GCTWN	NX.M0TTA.001	Ci32370M	NLED14WXGAG
E1-471G-331 16G50Mnks	WW	N9.M0TWW.002	Ci33110M	NLED14WXGAG
E1-471G-524 52G50Mnks	China	NX.M1SCN.002	Ci52450M	NLED14WXGAG
E1-471G-524 54G50Mnks	WW	N9.M1SWW.001	Ci52450M	NLED14WXGAG

Table 7-23. CPU, LCD (Continued)

Model	Country	Acer Part No	CPU	LCD
E1-471G-524 54G50Mnks	China	NX.M1SCN.001	Ci52450M	NLED14WXGAG
E1-471G-B96 2G50Mnks	India	NX.MOTSI.001	PMDB960	NLED14WXGAG
E1-471G-B96 2G50Mnks	India	NX.MOTSI.002	PMDB960	NLED14WXGAG
E1-471G-B96 2G50Mnks	Thailand	NX.M0TST.001	PMDB960	NLED14WXGAG
E1-471G-B96 2G50Mnks	GCTWN	NX.M0TTA.002	PMDB960	NLED14WXGAG
E1-471G-B96 2G75Mnks	Thailand	NX.M0TST.002	PMDB960	NLED14WXGAG
E1-471G-B96 4G50Mnks	Thailand	NX.M0TST.003	PMDB960	NLED14WXGAG
E1-471G-B96 4G50Mnks	Hong Kong	NX.M0TCF.002	PMDB960	NLED14WXGAG
E1-471G-B97 4G50Mnks	WW	N9.M0TWW.001	PMDB970	NLED14WXGAG

Table 7-24. VGA Chip, VRAM 1

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-471G-323 52G32Mnks	China	NX.M0TCN.001	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 52G50Mnks	Vietnam	NX.M0TSV.001	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 52G50Mnks	China	NX.M0TCN.002	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 52G50Mnks	China	NX.M0TCN.003	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.001	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.003	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 54G50Mnks	China	NX.M0TCN.004	N13MGS	1G-DDR3 (128*16*4)
E1-471G-323 72G50Mnks	GCTWN	NX.M0TTA.001	N13MGS	1G-DDR3 (128*16*4)
E1-471G-331 16G50Mnks	WW	N9.M0TWW.002	N13MGS	1G-DDR3 (128*16*4)

Table 7-24. VGA Chip, VRAM 1 (Continued)

Model	Country	Acer Part No	VGA Chip	VRAM 1
E1-471G-524 52G50Mnks	China	NX.M1SCN.002	N13PGL	1G-DDR3 (128*16*4)
E1-471G-524 54G50Mnks	WW	N9.M1SWW.001	N13PGL	1G-DDR3 (128*16*4)
E1-471G-524 54G50Mnks	China	NX.M1SCN.001	N13PGL	1G-DDR3 (128*16*4)
E1-471G-B96 2G50Mnks	India	NX.M0TSI.001	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B96 2G50Mnks	India	NX.M0TSI.002	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B96 2G50Mnks	Thailand	NX.M0TST.001	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B96 2G50Mnks	GCTWN	NX.M0TTA.002	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B96 2G75Mnks	Thailand	NX.M0TST.002	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B96 4G50Mnks	Thailand	NX.M0TST.003	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B96 4G50Mnks	Hong Kong	NX.M0TCF.002	N13MGS	1G-DDR3 (128*16*4)
E1-471G-B97 4G50Mnks	WW	N9.M0TWW.001	N13MGS	1G-DDR3 (128*16*4)

Table 7-25. Memory 1, Memory 2, HDD 1

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-471G-323 52G32Mnks	China	NX.M0TCN.001	SO2GBIII	N	N320GB5.4KS
E1-471G-323 52G50Mnks	Vietnam	NX.M0TSV.001	SO2GBIII	N	N500GB5.4KS
E1-471G-323 52G50Mnks	China	NX.M0TCN.002	SO2GBIII	N	N500GB5.4KS
E1-471G-323 52G50Mnks	China	NX.M0TCN.003	SO2GBIII	N	N500GB5.4KS_4K
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.001	SO4GBIII	N	N500GB5.4KS_4K
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.003	SO4GBIII	N	N500GB5.4KS_4K
E1-471G-323 54G50Mnks	China	NX.M0TCN.004	SO4GBIII	N	N500GB5.4KS_4K

Table 7-25. Memory 1, Memory 2, HDD 1 (Continued)

Model	Country	Acer Part No	Memory 1	Memory 2	HDD 1(GB)
E1-471G-323 72G50Mnks	GCTWN	NX.M0TTA.001	SO2GBIII	N	N500GB5.4KS_4K
E1-471G-331 16G50Mnks	WW	N9.M0TWW.002	SO2GBIII	SO4GBIII	N500GB5.4KS_4K
E1-471G-524 52G50Mnks	China	NX.M1SCN.002	SO2GBIII	N	N500GB5.4KS_4K
E1-471G-524 54G50Mnks	WW	N9.M1SWW.001	SO2GBIII	SO2GBIII	N500GB5.4KS
E1-471G-524 54G50Mnks	China	NX.M1SCN.001	SO4GBIII	N	N500GB5.4KS_4K
E1-471G-B96 2G50Mnks	India	NX.M0TSI.001	SO2GBIII	N	N500GB5.4KS
E1-471G-B96 2G50Mnks	India	NX.M0TSI.002	SO2GBIII	N	N500GB5.4KS_4K
E1-471G-B96 2G50Mnks	Thailand	NX.M0TST.001	SO2GBIII	N	N500GB5.4KS
E1-471G-B96 2G50Mnks	GCTWN	NX.M0TTA.002	SO2GBIII	N	N500GB5.4KS_4K
E1-471G-B96 2G75Mnks	Thailand	NX.M0TST.002	SO2GBIII	N	N750GB5.4KS_4K
E1-471G-B96 4G50Mnks	Thailand	NX.M0TST.003	SO4GBIII	N	N500GB5.4KS
E1-471G-B96 4G50Mnks	Hong Kong	NX.M0TCF.002	SO4GBIII	N	N500GB5.4KS_4K
E1-471G-B97 4G50Mnks	WW	N9.M0TWW.001	SO2GBIII	SO2GBIII	N500GB5.4KS_4K

Table 7-26. ODD, Extra SW1, Card Reader

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-471G-323 52G32Mnks	China	NX.M0TCN.001	NSM8XS	N	5 in 1-Build in
E1-471G-323 52G50Mnks	Vietnam	NX.M0TSV.001	NSM8XS	N	5 in 1-Build in
E1-471G-323 52G50Mnks	China	NX.M0TCN.002	NSM8XS	N	5 in 1-Build in
E1-471G-323 52G50Mnks	China	NX.M0TCN.003	NSM8XS	McAfee	5 in 1-Build in
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.001	NSM8XS	McAfee	5 in 1-Build in

Table 7-26. ODD, Extra SW1, Card Reader (Continued)

Model	Country	Acer Part No	ODD	Extra SW1	Card Reader
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.003	NSM8XS	McAfee	5 in 1-Build in
E1-471G-323 54G50Mnks	China	NX.M0TCN.004	NSM8XS	McAfee	5 in 1-Build in
E1-471G-323 72G50Mnks	GCTWN	NX.M0TTA.001	NSM8XS	McAfee	5 in 1-Build in
E1-471G-331 16G50Mnks	WW	N9.M0TWW.002	NSM8XS	McAfee	5 in 1-Build in
E1-471G-524 52G50Mnks	China	NX.M1SCN.002	NSM8XS	McAfee	5 in 1-Build in
E1-471G-524 54G50Mnks	WW	N9.M1SWW.001	NSM8XS	N	5 in 1-Build in
E1-471G-524 54G50Mnks	China	NX.M1SCN.001	NSM8XS	McAfee	5 in 1-Build in
E1-471G-B96 2G50Mnks	India	NX.M0TSI.001	NSM8XS	N	5 in 1-Build in
E1-471G-B96 2G50Mnks	India	NX.M0TSI.002	NSM8XS	McAfee	5 in 1-Build in
E1-471G-B96 2G50Mnks	Thailand	NX.M0TST.001	NSM8XS	N	5 in 1-Build in
E1-471G-B96 2G50Mnks	GCTWN	NX.M0TTA.002	NSM8XS	McAfee	5 in 1-Build in
E1-471G-B96 2G75Mnks	Thailand	NX.M0TST.002	NSM8XS	N	5 in 1-Build in
E1-471G-B96 4G50Mnks	Thailand	NX.M0TST.003	NSM8XS	N	5 in 1-Build in
E1-471G-B96 4G50Mnks	Hong Kong	NX.M0TCF.002	NSM8XS	McAfee	5 in 1-Build in
E1-471G-B97 4G50Mnks	WW	N9.M0TWW.001	NSM8XS	McAfee	5 in 1-Build in

Table 7-27. Wireless LAN1, Bluetooth, NB Chipset

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-471G-323 52G32Mnks	China	NX.M0TCN.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-323 52G50Mnks	Vietnam	NX.M0TSV.001	3rd WiFi 1x1 BGN	N	HM77

Table 7-27. Wireless LAN1, Bluetooth, NB Chipset (Continued)

Model	Country	Acer Part No	Wireless LAN1	Bluetooth	NB Chipset
E1-471G-323 52G50Mnks	China	NX.M0TCN.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-323 52G50Mnks	China	NX.M0TCN.003	3rd WiFi 1x1 BGN	N	HM77
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.003	3rd WiFi 1x1 BGN	N	HM77
E1-471G-323 54G50Mnks	China	NX.M0TCN.004	3rd WiFi 1x1 BGN	N	HM77
E1-471G-323 72G50Mnks	GCTWN	NX.M0TTA.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-331 16G50Mnks	WW	N9.M0TWW.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-524 52G50Mnks	China	NX.M1SCN.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-524 54G50Mnks	WW	N9.M1SWW.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-524 54G50Mnks	China	NX.M1SCN.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 2G50Mnks	India	NX.M0TSI.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 2G50Mnks	India	NX.M0TSI.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 2G50Mnks	Thailand	NX.M0TST.001	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 2G50Mnks	GCTWN	NX.M0TTA.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 2G75Mnks	Thailand	NX.M0TST.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 4G50Mnks	Thailand	NX.M0TST.003	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B96 4G50Mnks	Hong Kong	NX.M0TCF.002	3rd WiFi 1x1 BGN	N	HM77
E1-471G-B97 4G50Mnks	WW	N9.M0TWW.001	3rd WiFi 1x1 BGN	N	HM77

Table 7-28. Battery, Adapter, Camera

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-471G-323 52G32Mnks	China	NX.M0TCN.001	6CELL2.2	90W	HD
E1-471G-323 52G50Mnks	Vietnam	NX.M0TSV.001	6CELL2.2	90W	HD
E1-471G-323 52G50Mnks	China	NX.M0TCN.002	6CELL2.2	90W	HD
E1-471G-323 52G50Mnks	China	NX.M0TCN.003	6CELL2.2	90W	HD
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.001	6CELL2.2	90W	HD
E1-471G-323 54G50Mnks	Hong Kong	NX.M0TCF.003	6CELL2.2	90W	HD
E1-471G-323 54G50Mnks	China	NX.M0TCN.004	6CELL2.2	90W	HD
E1-471G-323 72G50Mnks	GCTWN	NX.M0TTA.001	6CELL2.2	90W	HD
E1-471G-331 16G50Mnks	WW	N9.M0TWW.002	6CELL2.2	90W	HD
E1-471G-524 52G50Mnks	China	NX.M1SCN.002	6CELL2.2	90W	HD
E1-471G-524 54G50Mnks	WW	N9.M1SWW.001	6CELL2.2	90W	HD
E1-471G-524 54G50Mnks	China	NX.M1SCN.001	6CELL2.2	90W	HD
E1-471G-B96 2G50Mnks	India	NX.M0TSI.001	6CELL2.2	90W	HD
E1-471G-B96 2G50Mnks	India	NX.M0TSI.002	6CELL2.2	90W	HD
E1-471G-B96 2G50Mnks	Thailand	NX.M0TST.001	6CELL2.2	90W	HD
E1-471G-B96 2G50Mnks	GCTWN	NX.M0TTA.002	6CELL2.2	90W	HD
E1-471G-B96 2G75Mnks	Thailand	NX.M0TST.002	6CELL2.2	90W	HD
E1-471G-B96 4G50Mnks	Thailand	NX.M0TST.003	6CELL2.2	90W	HD
E1-471G-B96 4G50Mnks	Hong Kong	NX.M0TCF.002	6CELL2.2	90W	HD

Table 7-28. Battery, Adapter, Camera (Continued)

Model	Country	Acer Part No	Battery	Adapter	Camera
E1-471G-B97 4G50Mnks	WW	N9.M0TWW.001	6CELL2.2	90W	HD

CHAPTER 8

Test Compatible Components

Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows® 7 environment.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the Aspire E1-431/E1-431G & E1-471/E1-471G. Compatibility Test Report released by the Acer Mobile System Testing Department.

Microsoft® Windows® 7 Environment Test

Table 8-1. Test Compatible Components

Vendor	Type	Description	Acer Part No.
A Cover			
60024358 ETANSI	Glossy Black IMR EAEG4A	A Cover Glossy Black IMR EAEG4A	LZ.21000.177
Adapter			
10001023 LITE-ON	65W	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-69AW, LV5, Low profile LED LF	AP.06503.029
10001023 LITE-ON	90W	Adapter LITE-ON 90W 19V 1.7x5.5x11 Blue PA-1900-32AW, LV5, Low profile LF	AP.09003.024
10001045 DELTA-MACAO	90W	Adapter DELTA 90W 19V 1.7x5.5x11 Blue ADP-90MD BBA, low profile, LV5 LF	AP.09001.032
10001081 DELTA	65W	Adapter DELTA 65W 19V 1.7x5.5x11 Yellow ADP-65VH BA, LV5, Low profile LED LF	AP.06501.033
60016453 CHICONY POWER	65W	Adapter Chicony Power 65W 19V 1.7x5.5x11 Yellow CPA09-A065N1, LV5, low profile LF	AP.0650A.017
60016453 CHICONY POWER	65W	Adapter Chicony Power 65W 19V 1.7x5.5x11 Yellow A065R035L / A11-065N1A, LV5, low profile LF	AP.0650H.003
60016453 CHICONY POWER	90W	Adapter Chicony Power 90W 19V 1.7x5.5x11 Blue A10-090P3A / A090A029L, LV5 low profile LF	AP.0900H.001
60036752 LITE-ON SINGAPORE	65W	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-86AW, LV5, Low profile LF	AP.06503.031
Audio Codec			
10004786 REALTEK	ALC271X_VB6	Realtek ALC271X_VB6 QFN-48	LZ.21000.161
B Cover			
9999995 ONE TIME VENDER	Mirror w/Camera	Mirror w/Camera	LZ.21000.009

Table 8-1. Test Compatible Components

Vendor	Type	Description	Acer Part No.
Battery			
10001063 SONY	6CELL2.2	Battery SONY AS10D Li-Ion 3S2P SONY 6 cell 4400mAh Main COMMON ID:AS10D41	BT.00604.049
60001535 PANASONIC	6CELL2.2	Battery PANASONIC AS10D51, for new IC max1787 Li-Ion 3S2P PANASONIC 6 cell 4400mAh Main COMMON	BT.00605.072
60001921 SANYO	6CELL2.2	Battery SANYO AS10D Li-Ion 3S2P SANYO 6 cell 4400mAh Main COMMON new IC BQ8055	BT.00603.124
60002162 SIMPLO	6CELL2.2	Battery SIMPLO AS10D Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON ID:AS10D73	BT.00607.126
60002162 SIMPLO	6CELL2.2	Battery SIMPLO AS10D Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D	BT.00607.127
60002162 SIMPLO	6CELL2.2	Battery SIMPLO ID:AS10D73, for HSF Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON	BT.00607.136
60002162 SIMPLO	6CELL2.2	Battery SIMPLO ID:AS10D75, for HSF Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON	BT.00607.137
60013145 SAMSUNG SDI	6CELL2.2	Battery SAMSUNG AS10D Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D61	BT.00606.008
60032811 LGC	6CELL2.2	Battery LGC AS10D Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON ID:AS10D81	BT.0060G.001
Camera			
10001023 LITE-ON	1.3M HD	Liteon 1.3M HD LT_2659_AU	AM.21400.095
10001023 LITE-ON	1.3M HD	Liteon 1.3M HD LT_6A1(TSV)_SP (9A)	AM.21400.100
10001023 LITE-ON	HD	Liteon HD LT_OV9726_SP 3.5mmLiteon 1.3M HD LT_HN161_SP	NC.21411.002
10001044 CHICONY	HD	Chicony HD CH_OV9726_AU 3.5mm	NC.21411.006
PLM00012 Suyin	1.3M HD	Suyin 1.3M HD SY_2659_AU	AM.21400.097
PLM00012 Suyin	1.3M HD	Suyin 1.3M HD SY_6A1(TSV)_SP (9A)	AM.21400.102

Table 8-1. Test Compatible Components

Vendor	Type	Description		Acer Part No.
Card Reader				
PLM00014 ODM	5 in 1-Build in	5 in 1-Build in MS, MS Pro, SD, SC, XD		CR.21500.013
CPU				
10001067 INTEL	Ci32350M	CPU Intel Core i3 i3-2350M PGA 2.3G 35W 2/4		KC.23501.DMP
10001067 INTEL	Ci32370M	CPU Intel Core i3 i3-2370M PGA 2.4G 35W 2/4		KC.23701.DMP
10001067 INTEL	Ci33110M	CPU Intel Core i3 i3-3110M PGA 2.3G 1600 35W Ivy Bridge		KC.31101.DMP
10001067 INTEL	Ci52450M	CPU Intel Core i5 i5-2450M PGA 2.5G 35W 2/4		KC.24501.DMP
10001067 INTEL	Ci53210M	CPU Intel Core i5 i5-3210M PGA 2.5G 1600 35W Ivy Bridge		KC.32101.DMP
10001067 INTEL	CMB720	CPU Intel Celeron B720 PGA 1.7G 35W DDR3-1333, 1/1		KC.72001.CMB
10001067 INTEL	CMB815	CPU Intel Celeron B815 PGA 1.6G 35W DDR3-1333		KC.81501.CMB
10001067 INTEL	PMDB960	CPU Intel Pentium Dual-Core B960 PGA 2.2G 35W DDR3-1333		KC.96001.DPB
10001067 INTEL	PMDB970	CPU Intel Pentium Dual-Core B970 PGA 2.3G 35W DDR3-1333		KC.97001.DPB
HDD				
60001922 TOSHIBA DIGI	N320GB5.4KS_4K	HDD TOSHIBA 2.5" 5400rpm 320GB MK3259GSXP, Capricorn 3BS, 375G/P, 4K drive SATA 8MB LF+HF F/W:GN003J 4K		KH.32004.005
60001922 TOSHIBA DIGI	N500GB5.4KS_4K	HDD TOSHIBA 2.5" 5400rpm 500GB MK5059GSXP, Capricron 3BS, 375G/P SATA 8MB LF+HF F/W:GN003J 4K		KH.50004.003
60001922 TOSHIBA DIGI	N750GB5.4KS_4K	HDD TOSHIBA 2.5" 5400rpm 750GB MK7559GSXP, 375G/P, Capricorn BS, 4K drive SATA 8MB LF+HF F/W:GN003J		KH.75004.001
60001994 WD	N320GB5.4KS_4K	HDD WD 2.5" 5400rpm 320GB WD3200BPVT-22JJ5T0, ML320S-AF2, 320G/P, 4K drive SATA 8MB LF+HF F/W:01.01A01		KH.32008.024

Table 8-1. Test Compatible Components

Vendor	Type	Description	Acer Part No.
60001994 WD	N500GB5.4KS_4K	HDD WD 2.5" 5400rpm 500GB WD5000BPVT-22HXZT3, ML375M-AF2, 375G/P, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.50008.024
60001994 WD	N500GB5.4KS_4K	HDD WD 2.5" 5400rpm 500GB WD5000BPVT-22A1YT0, ML500M, 500G/P SATA 8MB LF+HF F/W:01.01A01	KH.50008.036
60001994 WD	N750GB5.4KS_4K	HDD WD 2.5" 5400rpm 750GB WD7500BPVT-22HXZT3, ML375M-AF2, 375G/P, 4K drive SATA 8MB LF+HF F/W:01.01A01	KH.75008.011
60001994 WD	N750GB5.4KS_4K	HDD WD 2.5" 5400rpm 750GB WD7500BPVT-22A1YT0, ML500M, 500G/P SATA 8MB LF+HF F/W:01.01A01	KH.75008.017
60002005 HGST SG	N320GB5.4KS	HDD HGST 2.5" 5400rpm 320GB DUMMY P.N for BOM use SATA 8MB LF F/W:NA	KH.32007.015
60002005 HGST SG	N320GB5.4KS	HDD HGST 2.5" 5400rpm 320GB HTS543232A7A384,0J28213,Eagle B7, 320G/P 7mmzh SATA 8MB LF+HF F/W:DA4788	KH.32007.017
60002005 HGST SG	N500GB5.4KS	HDD HGST 2.5" 5400rpm 500GB Dummy P.N for 500G SATA 8MB LF+HF F/W:	KH.50007.015
60002005 HGST SG	N500GB5.4KS_4K	HDD HGST 2.5" 5400rpm 500GB HTS545050A7E380, Jaguar B7,0J23335, 500G/P SATA 8MB LF+HF F/W:DA4837	KH.50007.023
60002005 HGST SG	N750GB5.4KS	HDD HGST 2.5" 5400rpm 750GB Dummy P.N SATA 8MB LF+HF F/W: 0000	KH.75007.005
60002005 HGST SG	N750GB5.4KS_4K	HDD HGST 2.5" 5400rpm 750GB HTS547575A9E384, Jet B, 375G/P SATA 8MB LF F/W:DA3872	KH.75007.004
60002036 SEAGATE	N320GB5.4KS_4K	HDD SEAGATE 2.5" 5400rpm 320GB ST320LT020/9YG142-188, Sapta 15, 320G/P SATA 8MB LF+HF F/W:0001SDM1 7mmzh	KH.32001.021
60002036 SEAGATE	N320GB5.4KS_4K	HDD SEAGATE 2.5" 5400rpm 320GB 9WS14C-188 ST320LT012, Yarra 500G/P, 7mmzh SATA 8MB LF+HF F/W:0001SDM1	KH.32001.024

Table 8-1. Test Compatible Components

Vendor	Type	Description	Acer Part No.
60002036 SEAGATE	N500GB5.4KS	HDD SEAGATE 2.5" 5400rpm 500GB ST9500325AS,9HH134-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.50001.017
60002036 SEAGATE	N500GB5.4KS_4 K	HDD SEAGATE 2.5" 5400rpm 500GB 9WS142-188 ST500LT012, Yarra 500G/P, 7mmzh SATA 8MB LF+HF F/W:0001SDM1	KH.50001.030
60002036 SEAGATE	N750GB5.4KS_4 K	HDD SEAGATE 2.5" 5400rpm 750GB ST750LM022, HN-M750MBB, M8, 500G/P SATA 8MB LF+HF F/W:2AR10001	KH.75001.014
Keyboard			
10001044 CHICONY	TM4T_A11B	Keyboard CHICONY TM4T_A11B TM4T Internal 14 Standard Black NONE Y2011 Acer Legend Texture	NK.I1413.002
LAN			
10004786 REALTEK	RTL8411	Realtek RTL8411 EN	NI.22400.059
LCD			
10001022 CMI	NLED14WXGAG	LED LCD CMI 14' WXGA Glare N140BGE-L22 LF 200nit 10ms 650:1	KL.1400D.002
10001022 CMI	NLED14WXGAG	LED LCD CMI 14" WXGA Glare BT140GW01 V6 LF 220nit 8ms 600:1	LK.1400D.008
10001022 CMI	NLED14WXGAG P	LED LCD CMO 14" WXGA Glare N140BGE-E22 LF 200nit 10ms 650:1 (eDP)	LK.1400D.010
60003089 LG	NLED14WXGAG	LED LCD LPL 14" WXGA Glare LP140WH4-TLC1 LF 220nit 16ms	LK.14008.009
60003089 LG	NLED14WXGAG P	LED LCD LPL 14" WXGA Glare LP140WH4-TPA1 LF 220nit 16ms 500:1 (eDP)	LK.14008.012
60003316 AUO	NLED14WXGAG	LED LCD AUO 14" WXGA Glare B140XW01 V8 0A LF 220nit 8ms 500:1 (power saving)	LK.14005.010
60003316 AUO	NLED14WXGAG P	LED LCD AUO 14" WXGA Glare B140XTN01.0 LF 200nit 8ms 500:1 (eDP)	LK.14005.018

Table 8-1. Test Compatible Components

Vendor	Type	Description	Acer Part No.
Memory			
60001955 A-DATA	SO2GBIII13	Memory A-DATA SO-DIMM DDRIII 1333 2GB AD73I1B0873EV LF+HF	KN.2GB0C.008
60001955 A-DATA	SO4GBIII13	Memory A-DATA SO-DIMM DDRIII 1333 4GB AD73I1C1674EV LF+HF	KN.4GB0C.001
60001993 NANYA	SO2GBIII13	Memory NANYA SO-DIMM DDRIII 1333 2GB NT2GC64B88G0NS-CG LF+HF	KN.2GB03.025
60001993 NANYA	SO4GBIII13	Memory NANYA SO-DIMM DDRIII 1333 4GB NT4GC64B8HG0NS-CG LF+HF 46nm	KN.4GB03.009
60002041 QIMONDA	SO2GB	Memory NONE SO-DIMM DDRIII 2GB dummy LF+HF	KN.2GB00.004
60002041 QIMONDA	SO4GB	Memory NONE SO-DIMM DDRIII 4GB dummy LF+HF	KN.4GB00.003
60002045 HYNIX	SO2GBIII13	Memory HYNIX SO-DIMM DDRIII 1333 2GB HMT325S6CFR8C-H9 LF+HF 256x8 38nm	KN.2GB0G.031
60002045 HYNIX	SO4GBIII13	Memory HYNIX SO-DIMM DDRIII 1333 4GB HMT351S6CFR8C-H9 LF+HF 256x8 38nm	KN.4GB0G.012
60002050 MICRON SG	SO2GBIII13	Memory MICRON SO-DIMM DDRIII 1333 2GB MT8KTF25664HZ-1G4M1 LF+HF 256*8 46nm V79D	KN.2GB04.019
60002050 MICRON SG	SO4GBIII13	Memory MICRON SO-DIMM DDRIII 1333 4GB MT16KTF51264HZ-1G4M1 LF+HF 256*8 46nm V79D	KN.4GB04.005
60004668 ELPIDA	SO2GBIII13	Memory ELPIDA SO-DIMM DDRIII 1600 2GB EBJ20UF8BDU0-GN-F LF+HF 256*8 38nm	KN.2GB09.012
60004668 ELPIDA	SO4GBIII13	Memory ELPIDA SO-DIMM DDRIII 1600 4GB EBJ40UG8BBU0-GN-F LF+HF 512*8 38nm	KN.4GB09.005
60002215 SAMSUNG	SO2GBIII13	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5773DH0-CH9 LF 256*8	KN.2GB0B.030
60002215 SAMSUNG	SO4GBIII13	Memory SAMSUNG SO-DIMM DDRIII 1333 4GB M471B5273DH0-CH9 LF 256*8 35nm	KN.4GB0B.015

Table 8-1. Test Compatible Components

Vendor	Type	Description	Acer Part No.
60024207 KINGSTON-FAR EAST	SO2GBIII13	Memory KINGSTON SO-DIMM DDRIII 1333 2GB ACR256X64D3S13C9G LF+HF	KN.2GB07.006
60024207 KINGSTON-FAR EAST	SO2GBIII	Memory KINGSTON SO-DIMM DDRIII 1600 2GB ACR256X64D3S16C11G LF+HF 256*8 38nm	KN.2GB07.008
60024207 KINGSTON-FAR EAST	SO4GBIII13	Memory KINGSTON SO-DIMM DDRIII 1333 4GB ACR512X64D3S13C9G LF+HF	KN.4GB07.001
60024207 KINGSTON-FAR EAST	SO4GBIII	Memory KINGSTON SO-DIMM DDRIII 1600 4GB ACR512X64D3S16C11G LF+HF 256*8 38nm	KN.4GB07.003
NB Chipset			
10001067 INTEL	HM77	NB Chipset Intel CS HM77 Chief River	KI.G7501.002
ODD			
60001535 PANASONIC	NSM8XS	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8B0AW LF+HF W/O bezel SATA (Win7)	KU.00807.079
60001535 PANASONIC	NSM8XS	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8C0ADAA1-B LF+HF W/O bezel SATA Win7	KU.00807.081
60001929 PHILIPS & LITE-ON	NSM8XS	ODD PLDS Super-Multi DRIVE 12.7mm Tray 8X DS-8A8SH LF+HF W/O bezel SATA	KU.0080F.021
60001929 PHILIPS & LITE-ON	NSM8XS_BR	ODD PLDS Super-Multi DRIVE 12.7mm Tray 8X DS-8A8SH LF+HF W/O bezel SATA Brazil	KU.008BF.021
60001939 PIONEER	NSM8XS	ODD PIONEER Super-Multi DRIVE 12.7mm Tray DL 8X DVR-TD11RS LF W/O bezel 1.01 SATA HF + ZP (HME OPU)	KU.00805.051
60003901 HITACHI EAST	NSM8XS	ODD HLDS Super-Multi DRIVE 12.7mm Tray DL 8X GT51N LF W/O bezel SATA Zero Power Supported (HF + Windows 7)	KU.0080D.059
Palm rest Cover			
60024358 ETANSI	Glossy Silver IMR EAEG4P	Palmrest Cover Glossy Silver IMR EAEG4P	LZ.21000.178

Table 8-1. Test Compatible Components

Vendor	Type	Description		Acer Part No.
SB Chipset				
9999995 ONE TIME VENDER	N	N		KI.22800.011
Software				
10000981 MISC	McAfee	Antivirus application McAfee		SR.23900.001
VGA Chip				
10001067 INTEL	UMA	UMA (Intel)		KI.23200.038
60001915 NVIDIA	N13MGS	VGA Chip nVidia N13M-GS-B-A2 28nm, 29mmx29mm, GB4-128 package		KG.MGS0V.001
60001915 NVIDIA	N13PGL	VGA Chip nVidia N13P-GL-A1 40nm, 29x29mm, GB4-128 package		KG.PGL0V.001
VRAM				
10000981 MISC	1G-DDR3 (128*16*4)	1G-DDR3 128*16*4		KI.23300.029
60002045 HYNIX	VR2GBIII9	VRAM HYNIX Graphic DDRIII 900 2Gb H5TQ2G63BFR-11C LF 128*16 46nm		VR.2GB0G.002
60002045 HYNIX	VR2GBIII9	VRAM HYNIX Graphic DDRIII 900 2Gb H5TQ2G63DFR-11C LF+HF 128*16 38nm Gemma die		VR.2GB0G.005
9999995 ONE TIME VENDER	N	N no VRAM		KI.23300.014
WiFi Antenna				
10000105 WNC	PIFA	PIFA		LZ.23500.006
Wireless LAN				
10001018 HON HAI	3rd WiFi 1x1 BGN	Foxconn Wirelss LAN Atheros HB125 1x1 BGN		NI.23600.085
10001018 HON HAI	3rd WiFi 1x1 BGN	Foxconn Wirelss LAN Broadcom 4313 IPA 1x1 BGN		NI.23600.090
10001023 LITE-ON	3rd WiFi 1x1 BGN	Liteon Wireless LAN Atheros HB125 1x1 BGN		NI.23600.086

CHAPTER 9

Online Support Information

Introduction 9-3

Online Support Information

Introduction

This section describes online technical support services available to help users repair their Acer Systems.

For distributors, dealers, ASP or TPM, please refer the technical queries to a local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers convenient and valuable support resources.

In the Technical Information section users can download information on all of Acer's Notebook, Desktop and Server models including:

- Service guides for all models
- Bios updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Detailed information on Acer's International Traveller's Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all technical queries.

We are always looking for ways to optimize and improve our services, so do not hesitate to direct any suggestions or comments to us.